

**Summary of Discussions of the  
Eighteenth Meeting of the  
Cross Polar Trans East Air Traffic Management Providers Working Group  
(CPWG/18)  
16-19 December 2014 – Paris, France**

**1. Background**

1.1 The Eighteenth Meeting of the Cross Polar Trans East Air Traffic Management (ATM) Providers Working Group (CPWG/18) was hosted by ICAO EUR/NAT Office 16-19 December 2014. The schedule included meetings of the Air Navigation Service Providers (ANSPs), the Pacific Project Team (PPT) and the CPWG/18 plenary meeting.

1.2 The CPWG was established to provide a forum for ANSPs and airspace users to meet and explore solutions for improving air traffic services (ATS) to aircraft which operate between North America and Asia via Cross Polar (CP) and Russian Trans East (RTE) routes.

1.3 Leah Moebius facilitated the meeting. Forty-three participants attended, representing the ANSPs from Canada, Iceland, Japan, Norway, Russia, and the United States (US); the International Air Transport Association (IATA); international airlines and operators, and industry. The list of participants is at **Appendix A**.

**2. Opening of the Meeting**

2.1 Leah welcomed the attendees to Paris and to the 18<sup>th</sup> CPWG meeting and invited self-introductions.

**3. Agenda Item 1: Review and approve Agenda**

3.1 The following agenda was approved by the meeting

Agenda Item 1: Review and approve Agenda (WP/01)  
Review List of Meeting Documentation (IP/01)

Agenda Item 2: Administrative Matters (CPWG/17 Summary of Discussions – WP/02)

Agenda Item 3: Summary of Pertinent Issues from the ANSPs Meeting and other relevant meetings

- ANSPs Meeting to be reported on during regular agenda items
- Report on the Fourth Meeting of the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/4) (WP/05)
- CPWG Initiatives since TRASAS/3 in 2010 (IP/06)
- Update on ICAO Route Development Group Eastern Part of the ICAO EUR Region (RDGE)( IP/08)

Agenda Item 4: Report from the Pacific Project Team Meeting

Agenda Item 5: Provide Status on CPWG/17 Actions

## CPWG/17 Action Item List (WP/03)

### Agenda Item 6: ATS Route Catalogue Update

- State ATM ATS Route Catalogue Update (WP/08)
- Proposal for New Optimal Additional Connections for AMATI to SIMLI Trajectory (WP/09)
- Proposal for Some New Optimal Additional Connections for New Polar fix SALET to SIMLI. (WP/10)
- Proposal For Additional Wind Driven Connections For Newly Used Russian Transeast fix KOKES (WP/11)

### Agenda Item 7: 2014-2016 Cross Polar Work Program

- CPWG Work Program (WP/04)

### Agenda Item 8: Communications, Navigation, Surveillance (CNS) and Air Traffic Management (ATM) issues

- ANSP Updates/Presentations
  - NAV CANADA Update
  - FAA Anchorage Update
  - State ATM Corporation Update:
    - Volume of air traffic between Russia and neighbouring States January-October 2013-2014
    - Update on CNS Modernization
    - Traffic Density in Russian Airspace 2014
    - Traffic Demand vs. Capacity (IP/07)
    - State ATM Update on Airspace Structure of the Russian Federation (IP/12)
  - ISAVIA Update
  - Avinor Update
  - JCAB Update
- Airline Updates/Presentations
  - IATA
- Others
  - Astra - Space Weather and Polar Aviation
  - Inmarsat - Briefing

### Agenda Item 9: Other Business

### Agenda Item 10: Next Meeting

## 4. Agenda Item 2: Administrative Matters

4.1. Seventeen working papers (WPs) and thirteen information papers (IPs) were presented for discussion during the meeting:

Paper Number	Agenda Item	Action Number	Title of Paper	Presented by
WP/01	1		Proposed Agenda and Timetable	FAA
WP/01REV	1		Detailed Agenda	FAA
WP/02	2		Summary of Discussions of the Seventeenth Meeting (CPWG/17)	FAA
WP/03	5		CPWG/17 Action Item List	FAA
WP/04	7		Proposed CPWG Work Program	FAA
WP/05	3		Report on the Fourth Meeting of the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/4)	FAA
WP/06	5		Strategic Lateral Offset Procedure	FAA
WP/07	5		Russian Emergency Aerodromes Being Withdrawn from the AIP	United Airlines
WP/08	6		AIR TRAFFIC SERVICES ROUTE CATALOGUE	State ATM Corporation
WP/09	6		A Proposal for Some New Optimal Additional Connections for AMATI to SIMLI trajectory	United Airlines
WP/10	6		Proposal for some new optimal additional connections for new Polar fix SALET to SIMLI	United Airlines
WP/11	6		Proposal for Additional Wind Driven Connections for Newly Used Russian Transeast fix KOKES	United Airlines
WP/12	5	CP16-06, CP17-01	Reroutes and Coordination Issues Associated with Volcanic Events	FAA
WP/13	5	CP15-04, CP16-05	Proposing route between RFE (Russian Far East) and NOPAC (Ver. Dec 2014)	JCAB
WP/14	5	CP17-01	Route Change Message for in-flight status aircraft	JCAB
WP/15	5	CP14-02	Automatic coordination between Reykjavik OACC and Murmansk ACC	Isavia
WP/16	8		ADS-B Implementation Within Reykjavik CTA	Isavia
WP/17	8		Difference Between Cruise Climb And Block Flight Levels	Isavia
IP/01	1		List of Documentation	FAA
IP/02	5	CP16-01	Status of the Communication Failure Coordination Group	FAA

Paper Number	Agenda Item	Action Number	Title of Paper	Presented by
IP/03	8		Operational Constraints and Route Flexibility Issues Affecting Long Range Operations Between North America and China	UAL
IP/04	5	CP14-07	ICAO Inter-Regional AIDC Task Force Update	FAA
IP/05	5	CP07-02	Update on the VOLKAM/15 Volcanic Ash Exercise	JCAB
IP/06	3		CPWG Initiatives Since TRASAS/3 in 2010	FAA
IP/07	8	8	Traffic Demand vs. Capacity Update	State ATM Corp.
IP/08	3	CP10-08	Update on ICAO RDGE Meeting	ICAO EURNAT
IP/09	5	CP08-12 and CP14-11	Route Efficiencies within Anchorage Flight Information Regions	FAA
IP/10	5	CP06-02	Update on the Advanced Technologies and Oceanic Procedures "Ocean 21" (ATOP/OC21) Automation Platform	FAA
IP/11	8		Airspace Structure Of The Russian Federation	State ATM Corp.
IP/12	8		State ATM Update on Airspace Structure of the Russian Federation	State ATM Corp.
IP/13	5	CP10-14	Information On ETOPS Alternative Airports Development	State ATM Corp.
Presentation	8		Cross-Border Traffic Update	State ATM Corp.
Presentation	8		Space Weather and Polar Aviation	Astra
Presentation	8		NAV CANADA Update	NAV Canada
Presentation	8		ZAN Update	FAA
Presentation	8		State ATM Modernization Update	State ATM Corp.
Presentation	8		State ATM Traffic Density Update	State ATM Corp.
<b>Pacific Project</b>				
WP01			PPT08 Meeting Agenda	IATA/FAA
WP02			PPT7 Summary of Discussions	IATA
WP03			PPT7 Action Item List	IATA/FAA
WP04			TRASAS4 Conclusions and Pacific Project	IATA
WP/05			Pacific Project Work Program, Terms of Reference and Seamless Airspace Chart	FAA

4.2. Copies of all WPs and IPs, as well as additional information presented during the meeting were made available on the CPWG web site at [http://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/air\\_traffic\\_services/oceanic/ross\\_polar/](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/oceanic/ross_polar/)

## **5. Agenda Item 3: Summary of Pertinent Issues from the ANSPs Meeting and other relevant meetings**

*ANSPs Meeting, 16 December 2014*

5.1. Leah informed the meeting that the ANSPs Meeting had included discussions on issues to be covered during the plenary meeting. Details would be provided during discussions on specific action items. The ANSPs reviewed and updated the CPWG Work Program, which was made available to all participants. Details of the review are reflected in Agenda Item 3 and Appendix E.

*Fourth Meeting of the Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS/4)*

5.2. Leah informed the meeting the TRASAS/4 meeting was held in Bangkok, Thailand in October, 2014. The TRASAS/4 meeting was lightly attended.

5.3. Steve Pinkerton informed the meeting of TRASAS support of the work in CPWG and TRASAS support to the work of PPT for 2015.

5.4. It was agreed by the meeting to remove two (2) action items relating to communication and one (1) action item inviting ICAO representatives.

*CP11-01: Advance communications capabilities for the Arctic area **Closed**;*

*CP12-14: CPWG communications activities **Closed**; and*

*CP13-07: Request that TRASAS designate an ICAO representative to attend CPWG meetings **Closed***

## **6. Agenda Item 4: Report from the Pacific Project Team (PPT) Meeting**

6.1. Steve Pinkerton, FAA – ATO, and Blair Cowles, IATA, co-chaired the PPT meeting held on 16 December 2014. A report of the meeting and updated actions items is provided at **Appendix B**.

6.2. The FAA noted that the PPT has been re-focused to foster its effectiveness. This refocusing includes dividing the PPT geographic area of interest to conduct a gap analysis and develop a clear work program with near, mid, and long-term goals and deliverables. Another goal was to remove duplicate actions between the PPT, the CPWG and the Informal Pacific Air Traffic Coordination Group (IPACG). The meeting was also briefed on some short, mid, and long-term initiatives proposed by IATA.

## **7. Agenda Item 5: Provide Status on CPWG/17 Actions**

*CP14-12 Consider expanding trial for ADS-C Climb/Descend Procedures (CDP) to ZAN Airspace*

7.1. The FAA updated the group on ADS-C CDP automation development. The FAA stated that at CPWG/18, the meeting was provided with erroneous information that operational trials for ADS-C CDP were expected to resume in 2015. The FAA apologized for this error and noted that no further use of ADS-C CDP would be available until automation for the Advanced Technologies and Oceanic Procedures (ATOP) platform was available. Software is on-track for delivery to all three FAA oceanic facilities in the January-February 2016 timeframe, with expected availability for operational use in June 2016. It is expected that once available for operational use, it will be available within all three FAA Oceanic FIRs. The meeting was advised that the ICAO process to adopt and publish ADS-C CDP as a global standard was moving forward,

with expected Air Navigation Council (ANC) approval and publication in 2016..

7.2. A broader discussion about whether other ANSPs intended to implement ADS-C CDP once published as a global standard took place. JCAB noted that they were beginning to study the possibility of implementing in their airspace. Nav Canada noted that they had no plans to implement with expected use of space-based ADS-B. State ATM stated that ADS-C CDP is not currently part of their implementation plans. Further updates to be provided at CPWG/19.

*CP14-08: Improve flexibility of military airspace*

7.3. Canada described the coordination underway with the Canadian Department of National Defence (DND) to work together for access to the Cold Lake military airspace. Canada noted that, given their global military activities and recent terrorist incidents on Canadian soil, they did not expect any fruitful discussions that would allow them to further open airspace to overflights for at least the next year. An update will be provided at CPWG/19 meeting.

*Strategic Lateral Offset Procedure (SLOP)*

7.4 The FAA presented WP/06 regarding use of SLOP in the Arctic FIR and with adjacent FIRs and ANSPs. The paper was intended to try to harmonize procedures amongst ANSPs but the meeting noted that SLOP was not mandatory and it was agreed that this would be coordinated directly with ANSPs for consideration at a later time.

*CP01-08C: ATFM Collaboration between the FAA/ATO and State ATM*

7.5 FAA and State ATM advised they expected the Air Traffic Flow Management (ATFM) Annex and supporting letter of agreement (LOA) to be finalized in early 2015. An update will be provided at the CPWG/19 meeting.

*CP10-02: Provide flow constraint information*

7.6. State ATM presented IP/07 to provide updates on traffic capacity versus demand. State ATM noted that they have increased capacity but the data shows that demand remains below capacity. Since this information has shown that as sector capacity has increased, airspace is no longer constrained, State ATM requested that this action item be closed. The meeting participants agreed and the action was closed.

*CP10-08: Improved contingency collaboration between State ATM and Japan Civil Aviation Bureau (JCAB)*

7.7. JCAB and State ATM have been working to develop contingency plans and will continue to work on a bilateral basis. A LOA between State ATM and JCAB was in the process of being reviewed by the Russian Federal Air Transport Agency (FATA) and State ATM noted that it would follow-up with FATA to determine status.

*CP16-04: Monitor Activities of the User Trajectory Planning (UTP) Program.*

7.8. FAA provided a briefing on the status of User Trajectory Planning (UTP) program. The FAA noted that the future of UTP is uncertain at this point and suggested that this action be closed until further information becomes available. The FAA will provide a briefing to the CPWG once more details on that status of the program become available. The meeting agreed to close this item.

*CP04-31: Implement use of radar procedures between Magadan Area Control Center (ACC) and Anchorage Air Route Traffic Control Center (ARTCC)*

7.9 State ATM advised that the power source for the Providenia radar will be provided by mainland Russia rather than a local diesel generator as originally planned. In addition, due to challenges with climate implementation is now expected in 2018.

*CP06-02: Implement Ocean21 in the Arctic FIR*

7.10 Anchorage Center briefed on the progress of testing and planned implementation of the ATOP platform in the Arctic FIR. Anchorage noted that testing had been successful though some minor problems were noted. While these issues were minor, they still required software updates that were expected to be available in the early part of 2015..

7.11 The FAA advised that it is expected that ATOP can be implemented in “Sector 64” in late May 2015. With this implementation, there will not initially be any separation changes, since there are limitations in the performance of ADS-C and CPDLC north of 82 North and for other reasons.

7.12 United Airlines asked if guidance will be provided to advise flight crews on connection management issues at and north of 82 North. Anchorage advised this was not currently planned, but the final decisions about what would or would not be done would be made in 2015. Updates would be provided at CPWG/19.

*CP08-12: Eliminate restrictions where possible*

*CP14-11: Eliminate requirement to flight plan over named or latitude/longitude (lat/long) fixes at 141W*

7.13 Anchorage Center noted during its presentation of IP/09 that it expected that the requirement to flight plan along specific points along 141W will be removed once ATOP is implemented in the Arctic FIR (Sector 64) and controllers have gained sufficient operational experience.

7.14 Anchorage Center indicated that many of the current restrictions were required to address the interface between ATOP and the Anchorage domestic systems or with remote/non-surveillance airspace. Certain restrictions could be addressed unilaterally with implementation of ATOP in the Arctic, while other restrictions would need to remain in place due to traffic and separation considerations.

7.15 UAL asked for an update on the status of R220 becoming an RNP-4 exclusive route. Anchorage advised that the safety analysis was still ongoing and a determination had yet to be made.

*CP14-13: Replacement of Bodo oceanic automation system*

7.16 Avinor advised there had been some issues identified during initial testing. These issues have been addressed, and it was expected that the new system would come on line March 5, 2015. An update to be provided at CPWG/19.

*CP04-35: Shorten and simplify Form “R” and filing process*

7.17 State ATM advised the meeting that it was ready to support an operational trial with to simplify Form “R” and filing procedures.

7.18 IATA and United Airlines (UAL) will provide an update on trial and share results with other airlines. UAL will provide information/link to SITA mailbox page which supports transmission of attachment files.

7.19 UAL stated that airlines wished to simplify their filing by listing possible entry and exit points, rather than specific pairs. State ATM advised that a decision on this could only be made by FATA and that IATA would need to formally submit a request to FATA. IATA will follow up on this action. An update to be provided at CPWG/19.

*CP07-02: Add additional entry/exit fixes on the FIR boundaries*

7.20 State ATM advised there had been two entry fixes (SALET and BARIP) implemented, which were being well utilized. State ATM is considering adding two more entry fixes, based on further coordination with airspace users. UAL expressed appreciation for this consideration and the additional flexibility it would provide for operators.

*CP12-04: Monitor changes to Track Advisory Users Guide (TAUG)*

7.21 Anchorage Center provided a verbal update on changes made to the TAUG due to the addition of the fixes SALET and BARIP by State ATM.

*CP12-06: Coordination between State ATM and General Administration of Civil Aviation of China (CAAC) Air Traffic Management Bureau (ATMB)*

7.22 State ATM requested Chinese airline representatives in attendance to coordinate with Chinese authorities to urge for more entry/exit fixes on the Russia/China boundary and for more ATS route flexibility within Chinese airspace.

7.23 IATA indicated that they have established a China Task Force to focus its efforts on addressing the concerns with ATM in Chinese airspace. One of the main goals of IATA is to encourage China to attend meetings such as CPWG where they could engage with other ANSPs and airspace users.

*CP14-10: Provide information on the Oakland FIR trial to merge Pacific Organized Track System (PACOTs) Tracks C/E*

*CP16-02 Provide information on the Oakland FIR trial for User Preferred Routes (UPRs) on PACOTS Track F*

7.24 The FAA provided a verbal update and told the meeting that the Track F UPR trial has been successful to date and that no significant issues have been identified. An update will be provided to CPWG/19.

7.25 The FAA also provided the meeting with a verbal briefing regarding the Track C and E merge trial. During the initial trial period, issues related to track loading and gateway fix times resulted in an increase in controller workload that necessitated stopping the trial. Oakland Center has been working closely with JCAB and Anchorage to develop procedures to resume the trial; however, issues exist with the use of non-standard altitudes. The FAA hopes to resume this operational trial in February 2015. An update will be provided to CPWG/19.

*CP15-03: Provide information on RTE and Arctic FIR traffic count data*

7.26 During CPWG/15, IATA and the airlines made a request for more detailed traffic count with hourly and daily breakdowns of traffic flow. The FAA and other ANSPs have evaluated this request and noted that collecting this type of information is labor intensive and it is unclear what the purpose of providing such data is. The FAA stated that it has provided traffic count data in the past but it was unclear about how and what the information was being used for. IATA stated that they would like to use the information to



determine when/where traffic may be at an off-peak flow in order to develop potential operational trials. IATA stated that it would work with the ANSPs to clarify and narrow the scope of its request.

*CP10-13: Expand Controller-Pilot Data Link Communications (CPDLC)/Automatic Dependent Surveillance – Contract (ADS-C) capability for Magadan FIR and install CPDLC/ADS-C at Murmansk*

7.27 State ATM advised that Magadan had expanded the use of CPDLC into the north sector in August 2014 and it was expected that CPDLC would be implemented in Murmansk in 2018. Petropavlovsk-Kamchatsky (P-K) was expected to be combined with Magadan and there were no plans to implement CPDLC at P-K. Updates would be provided to subsequent CPWG meetings.

*CP14-02: Establish flight data exchange between facilities*

7.28 Vancouver advised the meeting that AIDC testing between Vancouver and Oakland was ongoing, with expected implementation in February 2015. Vancouver noted that the main issues were related to NAM ICD and that Oakland was waiting for additional ATOP software fixes that will resolve. State ATM advised that technical availability of the equipment for Magadan ACC is expected in 2015 with testing and commissioning in the third quarter of 2016. AIDC between Russian Federation and Sapporo was expected in 2016. Following implementation with Sapporo, State ATM will begin work to implement between itself and Anchorage. Technical availability of AIDC for Khabarovsk ACC is anticipated.

7.29 Isavia presented WP/15 stating that Reykjavik OACC and Murmansk ACC have agreed to implement automatic coordination between the two centres. A meeting to discuss the implementation took place in Murmansk on December 2nd and 3rd 2014. An update to be provided at CPWG/19.

*CP14-07: Monitor the progress made by the Inter-Regional APAC/NAT AIDC Task Force*

7.30 FAA provided an update on the Inter-Regional Air Traffic Service Inter-facility Data Communications (AIDC) Task Force (IRAIDCTF) effort to harmonization the AIDC documents (IP/04). As a result of their final meeting, the IRAIDCTF was able to produce the Pan Regional (NAT and APAC) Interface Control Document for ATS Interfacility Data Communications (PAN AIDC ICD) Version 1.0. The PAN AIDC ICD is expected to function like other guidance documents (e.g. GOLD) and is expected to evolve into a global document through ICAO OPLINKP endorsement. This action item was considered complete and closed by the meeting.

*CP16-01: Communications Failure Working Group (CFCG)*

7.31 FAA presented IP/02 which included the proposal drafted by the last CFCG meeting. Recommendations for communication failure procedures were drafted and are being circulated for comment. It was noted that a potential difficulty for cross-polar operations was the recommendation that an aircraft maintain its last assigned altitude for a specified time and then fly via the published altitudes and speeds of its filed flight plan. Due to flight duration it is possible that an aircraft would have multiple planned step-climbs along its flight plan which it may or may not be capable of accepting, meaning ATC would need to protect all possible altitudes in the filed flight plan. As new developments occur the CPWG will be informed, however, this Action Item is closed.

*CP10-14: Provide information on minimum level of service maintained outside operational hours for emergency diversions*

7.32 UAL presented WP/07 that discussed a change to the Russian AIP removing several aerodromes from the International AIP and placed them in the Domestic AIP. UAL highlighted that some airports,

which would not be open at all times, could serve as emergency diversion airports if they could be available for emergency purposes outside their official open hours. The paper asked for State ATM and FATA to reconsider these changes.

7.33 State ATM clarified that information concerning airports available to international flights can be found in Book 2 of the Russian AIP. He also noted that any airport in Book 2 designated as a domestic airport would be available for emergency use to international flights.

7.34 There was still some confusion over how or whether an airport can be considered as “available” for emergency purposes. IATA took an action to seek clarification from FATA about how or whether an airport could be considered as available for emergency purposes.

*CP15-04: Develop CPWG Volcanic Ash Contingency Plan*  
*CP17-03 Propose New Route from PK FIR to Fukuoka FIR*

7.35 JCAB presented WP/13 proposing contingency routing procedures between the Russian Far East (RFE) and North Pacific (NOPAC) route structures. JCAB noted the results of discussions at CPWG/17 regarding reroutes of aircraft from R220 and some of the challenges associated with reroutes between P-K, Anchorage, and Fukuoka, including poor HF radio coverage. JCAB expressed an interest in developing an assumed LOA between Fukuoka, P-K, and Anchorage for use at VOLKAM/15. JCAB also noted several considerations for establishment of permanent ATS contingency routes.

7.36 Chris Keohan of ICAO EUR/NAT noted that the proposed routes might not be beneficial for volcanic ash contingency, since they would lie in the likely path of volcanic ash from Kamchatka Peninsula volcanoes; he suggested that consideration be given to establishing contingency routes to the west, instead.

7.37 Airline representatives further suggested that, when developing these procedures, consideration be given to the likely routes on which aircraft would be operating, given the volcanic activity, rather than considering that the usual traffic would be operating. JCAB agreed to coordinate further and take other items into consideration.

*CP15-06: Consider utilizing the ATM Volcanic Ash Contingency Plan (VACP) Template in the development of Volcanic Ash Contingency Plan for NOPAC and RTE*

7.38 Chris Keohan requested that Vancouver be involved in VOLKAM exercise for Far East airspace, since diversion coordination would likely involve them. He also requested operational contact information for inclusion in the plan. The next VOLKAM exercise will be in May 2015. Vancouver agreed to participate. A new draft plan will be circulated in January 2015.

7.39 JCAB presented a proposed VOLKAM sheet to be used by each stakeholder to track information, updates and highlighting issues that need to be addressed. It is suggested that this sheet be filled in and shared prior to each telcon to assist all stakeholders taking part in telcons to have the same information. This would assist people to communication with each other, irrespective of language differences, accents and quality of telcon audio.

7.40 Chris Keohan confirmed that he would include the VOLKAM sheet as part of what would be used in the upcoming VOLKAM 15 exercise. New Action CP18-01 was opened for participating ANSPs to provide update on upcoming VOLKAM15 exercise scheduled for April 2015 to the CPWG/19 meeting.

*CP15-08: Provide an update from Air Traffic Management Group (ATMG) with respect to NAT Volcanic Ash Contingency Plan*

7.41 Isavia advised the meeting that the change to the PANS ATM, which became effective in November 2014, had been reflected in an updated North Atlantic Volcanic Ash Contingency Plan (NAT VACP), in NAT Doc. 006.

7.42 Under the new plan, a 100 NM danger area would be created as soon as notification of the volcanic eruption was received. This process remains unchanged from what was done prior to adoption of the new NAT VACP. Once the MET Office began issuing SIGMET about the actual or forecast volcanic ash, the NOTAM would be withdrawn and all further action would be based on the information in the SIGMET and individual aircraft operator procedures.

7.43 Isavia considered using a SIGMET methodology to advise of areas of low, medium and high contamination, but found, during a recent exercise, that the workload involved in issuing this information in a separate SIGMET was too high. This may change in future, but that is not known at the current time. Any updated information will be proved at the next CPWG/19.

7.44 ICAO advised there was some concern expressed about SIGMETs providing information on three different volcanic ash contamination levels. ICAO noted there would be a EUR/NAT Volcanic Ash Task Force convened in January 2015, with the goal of harmonizing the NAT and EUR Volcanic Ash contingency plans.

*CP15-09: Streamline the process for establishing danger areas through NOTAM process*

7.45 State ATM described to the meeting the recent events when a scientific rocket launch was being planned which affected Arctic airspace and various FIRs. The danger area proposed by the launching agency would have had a significant impact on polar flights - a large portion of airspace closed for 12 hours per day for a two week period.

7.46 State ATM further explained that the various ANSPs involved should coordinate with each other and any launching agencies to limit impacts on Polar flights to the extent possible and to ensure they took well-coordinated actions on establishing danger areas. State ATM requested that the meeting seek guidance from ICAO on which entity has priority in the airspace if there would be significant impact on civilian traffic from a proposed rocket launch.

7.47 NAV CANADA noted the difficulties associated with operation over high seas and the lack of ability to deny services or give priority to one entity over another. The FAA discussed issues it had encountered with missile launch activity in the Central Pacific that had a significant impact on traffic to/from the Hawaiian Islands. The FAA noted its efforts to reach out to the agency requesting to conduct the launch activity and the data collection/analysis by Oakland Center to show impact on aircraft operators. Through this collaborative approach, Oakland was able to mitigate the impact to aircraft operators while still providing the missile launch entity service. The FAA agreed to share the data analysis conducted by Oakland with CPWG ANSPs.

7.48 Avinor advised the meeting that the space agency in Norway was seeking feedback from the meeting in an effort to improve safety and efficiency during launches and recovery of space vehicles.

7.49 Airline representatives expressed their appreciation for provision of advance notice and also of the efforts made to minimize the amount of airspace affected and coordinate for different times for operations which would disrupt a significant number of aircraft. They also appreciate timely notifications when launches are scrubbed.

7.50 ICAO will be holding an ICAO / UNOOSA Aerospace Symposium in Montréal from 18 to 20 March 2015, as announced in State Letter 2014/086. Some of the concerns surrounding testing by commercial aerospace agencies could possibly be raised at this symposium. Carol Stewart-Green of NAV CANADA provided this State Letter to Leah for distribution to the meeting.

*CP16-06: Review communications procedures between dispatchers and the ATCSCC relating to reroutes for Volcanic Ash.*

*CP17-01: Route Change Message for in-flight status aircraft.*

7.51 JCAB presented WP/14 to the meeting regarding airborne reroutes and use of CHG messages by aircraft operators. The paper indicated that the best procedure was for the flight crew to request a new route from ATC and then for ATC to provide the clearance and the aircraft to change its route.

7.52 The group discussed the issue and agreed that the least ideal way to communicate new routes was via voice, particularly HF voice - this is subject to readback/hearback errors and could become impossible if a significant number of reroutes were required, such as during a volcanic ash event. The meeting seemed to be in agreement that using CPDLC for reroute messages was the most ideal way for flights to request and receive reroutes. The difficulty appeared to be around how the dispatcher could most effectively and efficiently communicate new routes or requested routes to ANSPs.

7.53 It was acknowledged by the meeting that AIDC facilitated timely and accurate coordination between ACCs. There are several issues involved - the pilot/ATC interaction and then the ATC to ATC coordination regarding the specific details of that flight. JCAB indicated that a CHG message might be an effective way for AOC to advise an ACC of new route request, but until the flight crew had received and accepted the route, this would not actually be the new route.

7.54 FAA presented WP/12 to discuss route change coordination issues and attempt to develop a harmonized approach with best practices for coordinating route changes when a large-scale reroute event, such as reroutes due to a volcanic eruption, took place. The paper noted a number of questions raised resulting from the reroute of AAL175 during a volcanic eruption in October 2013. In particular was the use of CHG messages to forward reroute information. WP/12 gave examples of how FAA domestic and ATOP systems process CHG messages depending on pre and post-departure phases of flight. The FAA expressed that it felt that use of CHG messages were unacceptable if used post-departure and that airlines must manually coordinate if the CHG message is used within 45 minutes of the proposed departure time. -

7.55 There are different provisions for handling CHG messages by different ANSPs and some ANSPs prefer use of CHG messages even post-departure. The aircraft operators expressed that CHG messages are the only mechanism for AOCs to advise of a new route using automation, within current global provisions.

7.56 NAV CANADA explained to the meeting the difference between an Flight Plan (FPL) and Current Flight Plan (CPL). The CPL is, by definition, the FPL as modified by subsequent clearances. Therefore, as soon as the flight departs, they are on a CPL. A change to the "flight planned route" by AOC after a flight had departed would change the clearance, since flights are most often cleared "via flight planned route".

7.57 State ATM suggested that a table be developed to indicate how each individual ANSP deals with route changes once an aircraft is airborne. In this way, we may discover a method that is acceptable to all.

7.58 Completing the table will be a new CPWG action item. ICAO requested that, if possible, it be completed before March 2015, and the ANSPs agreed this could be done.

*CP17-10: DEP messages from FAA not being received by State ATM and JCAB*

7.59 The FAA advised that analysis had revealed that not all en route facilities were compliant with DEP message procedures or aware of the AFTN addresses to which DEP messages should be sent for Russia and Japan. The FAA developed guidance that was distributed to all en route facilities and combined facilities (e.g. Honolulu and Guam) approximately one week prior to the start of CPWG/18.. State ATM expressed their appreciation for the efforts of the FAA to improve this situation and noted that already there had been a good improvement. The FAA will work with JCAB and State ATM between meetings to determine where improvement is still needed. The action was left open and will be updated at CPWG/19.

## **8.0 Agenda Item 6: ATS Route Catalogue Update**

8.1 The meeting reviewed the updated ATS Route Catalogue (WP/08) which was presented by State ATM Corp.

8.2 UAL presented WP/09 to suggesting Optimization of AMATI to SIMLI by the addition of the following connections/routing for State ATM consideration:

1. NERPA DIRECT NODRO DIRECT MABUT DIRECT AAAAAA(crossing point on airway B153) DIRECT intersection with Airway A801/B148 DIRECT BBBBB(crossing point on airway R30 DIRECT intersection B152/A802 DIRECT CCCCC (crossing point R22) DIRECT DDDDD (crossing point on Airway B101) DIRECT ODENA DIRECT BUDES DIRECT BANIR.
2. State ATM confirmed that they would consider the proposal regarding AMATI to SIMLI. He advised that in April, 2015 there would be additional transitions that might provide the requested flexibility for the other proposals; Gene advised the proposals had been done prior to knowing about those new transitions and he would study the proposal and advise whether the proposals were still requested.

8.3 UAL presented WP/10 suggesting Optimization of SALET to SIMLI by the addition of the following connections/routing:

- *RODOK DIRECT ODANA DIRECT OGMUS DIRECT NINON then existing airways to BANIR and then SIMLI*

8.4 UAL presented WP/11 proposing Additional Wind Driven Connections for Newly Used Russian Trans-east fix KOKES as follows:

- Removal of dead-end/dogleg at IRKAN and connect to airway B804 will allow the option of avoiding headwinds and connecting to multiple other airways that also allow avoidance of North Pacific Headwinds (and volcanic ash).
- The proposal as outlined above is to add IRKAN to OSMOR with crossing fixes on Airways B244(KOKUN) and B241.
- Additional proposal is DIPNA DIRECT GEFAR or NK DIRECT GEFAR for avoidance of headwind/jet stream over North Pacific.

8.5 Action Items CP17-08 and CP17-09 were moved to the State ATM ATS Route Catalogue. The new proposals presented during the meeting will be evaluated and moved to the ATS Route Catalogue and

updates will be provided at CPWG/19.

## **9.0 Agenda Item 7: 2014-2015 Cross Polar Work Program**

9.1. During the ANSPs meeting, the Work Program and CPWG Planning Chart were reviewed and updated and provided as Appendix E.

## **10. Agenda Item 8: CNS and ATM Issues**

### **ANSP Updates**

#### *Isavia*

10.1. Isavia presented a paper (WP/16) advising the meeting that it is in the process of implementing ADS-B surveillance service in specified parts of Reykjavik CTA. The implementation has already started and is expected to end in a fully implemented radar-like ADS-B service in late 2015

10.2. An Aeronautical Information Circular (AIC) that Iceland published on 22 August 2014 concerning the Automatic Dependent Surveillance Broadcast (ADS-B) implementation in the Reykjavik Control Area (CTA) was also introduced.

10.3. Isavia presented a paper (WP/17) introducing to the meeting information regarding the difference between cruise climb and block flight levels.

- *The paper and discussion by the ANSP's highlighted the confusion between the two clearances and to specify a path to clarify those operational differences.*
- *Changes to NAT Doc007 have been proposed to clarify the difference between cruise climb and clearances to operate within block of flight levels.*

10.4. Isavia advised that the most recent volcanic ash exercise had not been a success. The MET Office had not been able to issue the number of SIGMET expected under the new provisions to provide information on different ash contamination levels.

#### *State ATM Corporation*

10.5. State ATM presented to the meeting updated information (IP/07) regarding traffic demand vs. capacity data compiled since CPWG/17.

10.6. State ATM presented to the meeting information (IP/11) on the modernization of the airspace structure within the Russian Federation. The paper included:

- *An introduction which compared domestic/international traffic increases/decreases from 2013 to 2014;*
- *A description of Russian Federation Air Traffic Service Units;*
- *A description of improvements to the Russian ATS Routes;*
- *A chart tallying the number of ATS Routes implemented since 2004;*
- *A chart cataloguing Routes and Mileage expansion since 2001;*
- *A chart identifying and describing ATS Routes implemented in 201, and*
- *A chart depicting CPWG/17 Action Plan implementation status.*

10.7. State ATM Corp. Presented to the meeting information (IP/12) regarding planned improvements

to the airspace structure which included:

- *A chart listing changes to the Russian Federation airspace structure proposed for 2<sup>nd</sup> quarter of 2015;*
- *An plan view chart depicting significant changes to Yekaterinburg and Novosibirsk FIRs;*
- *Plan view charts depicting new ATS routes to be implemented, and*
- *A geographical chart depicting changes to ACC's in 2017 – 2017*

10.8. State ATM presented a slideshow depicting the volume of Air Traffic between Russian and her neighboring States during 2013 and 2014.

10.9. State ATM presented a thorough account of the Update on CNS Modernization in 2014 which included a slideshow and verbal briefing.

10.10. State ATM presented a slideshow and verbal briefing regarding Traffic Density in Russian Airspace in 2014. While traffic domestic and total traffic increased in accordance with recent trends, international flight decreased slightly over the year before (2013).

#### *NAV Canada*

10.11. NAV Canada provided an update to the meeting on activities since CPWG/17 with a focus on Edmonton Center.

- Polar Traffic up two percent (2%), overall Arctic high traffic is up four percent (4%),
- UPRs within the Arctic High Polar Airspace have negated the requirement for a rigorously defined track system within the airspace,
- Proposed airspace changes include:
  - Revoke Some NCA, Mike and Lima tracks,
  - Leave Named Fixes on these tracks as fixes in space,
  - Add any named fixes as required,
  - Change LAT LONG fixes on remaining tracks to five letter identifiers.
- Customer Service Initiatives include:
  - Continued support for PBN,
  - T and Q route implementation,
  - Review of ground based NAV AIDS,
  - Continued planning for RNP expansion.

10.12. Edmonton Center is coordinating with Cold Lake (CYR 204) to lower the vertical limits of the restricted airspace. Due to recent attack at the Canadian Parliament and additional training requirements, Cold Lake is not likely to decrease the limits of the restricted airspace.

#### *FAA -Anchorage Center Update*

10.13. Anchorage Center provided an update (IP/09) on Route Efficiencies with Anchorage Flight Information Region. While no new efficiencies were reported, once controller experience at Sector 64 is increased, constraints contained in A0367 are expected to be reduced, save those flights routed over or North of BARIP and over or South of PILUN.

10.14. Anchorage also presented a verbal briefing describing an overview of Anchorage Center (ZAN)

operations. Along with a description of ZAN's workforce and airspace structure, traffic count data was presented and a depiction of volcanic activity within the region was provided. Conversion of Sector 4 to Sectors 4 and 64 was described to the meeting as were planned large scale military exercises. Information pertaining to Special Use Airspace may now be obtained at: <http://sua.faa.gov/>.

#### *FAA – ATCSCC Update*

10.15. The FAA Command Center provided a video presentation and discussed efforts made to sterilize airspace and restore service at Chicago Center following a deliberately set fire that destroyed critical systems. The presentation highlighted efforts to enact contingency plans and restore service to the center.

#### *Astra*

10.16. Joe Kunches, Director, Space Weather Services, ASTRA (Atmospheric & Space Technology Research Associates) provided to the meeting a slideshow presentation and briefing regarding Space Weather and Its Impacts to Polar Aviation. The briefing presented information regarding historic traffic count data for the Polar Regions and an explanation of solar activity and its effect on aviation communications and navigation.

10.17. Solar Cycle 24 (cycles runs approximately 11 years) will peak in mid-cycle. Solar Cycle 24 is expected to be less disruptive than Solar Cycle 23 and Solar Cycle 25 is expected to be less disruptive to aircraft than Solar Cycle 24.

10.18. Astra can assist with forecasting and providing graphic representations of when/where GPS lock could be lost or WAAS or communications could be affected.

#### *United Airlines*

10.19. United Airlines presented to the meeting information (IP/03) regarding of operational constraints and route flexibility issues affecting long range operations between North America and China. The paper illustrates the significant differences in flexibility for international operations when comparing the operational constraints of China with Russia.

#### *Inmarsat*

10.20. Gary Colledge, accompanied by Yasmine Ibnayhya provided to the meeting information regarding the lifespan of Inmarsat's fleet of satellites. Inmarsat provides expected lifetimes of its fleet in each annual report, publicly available on the Inmarsat website.

10.21. Paumalu GES supports SBB and Classic Aero over northern Canada and a bit of south-western Greenland. Details were provided on the Inmarsat coverage over Greenland. Inmarsat sees reports from aircraft to 84 North over Greenland (landmass extends to 83 North).

10.22. The shape of the new generation top-mounted antennae, which is specified for - 5°, allows signals from the aircraft to be received within much larger areas of operation than would be expected from the basic physics of the satellite beam patterns.

10.23. The Alphasat's beam coverage is shaped to fit "between" the existing satellite beam coverage for the I-4's. This increases the efficiency of spectrum utilization (which has knock-on benefits for network performance).



10.24. It was noted that, after the I-3's end service (approximately 2018), the NAT will experience decreased Inmarsat coverage. Yasmine advised the meeting that the first I-6's are expected to be launched at the end of 2019.

#### **11.0 Agenda Item 10: Next Meeting**

11.1 JCAB and IATA generously offered to host the CPWG/19 meeting in Tokyo, Japan. The Meeting is scheduled for May 11-15, 2015. Further details and information on travel requirements would be made available closer to that date.

11.2 CPWG/20 has been tentatively planned for Anchorage, Alaska, USA, in October or November 2015 and hosted by the FAA. Details will be discussed at the next meeting.

#### **12. Closing of the Meeting**

12.1 Leah thanked all participants for their support and participation in the meeting.

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**CPWG/18 Action List**

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP01-08C	Administration	ATFM collaboration between FAA/ATO and State ATM	State ATM and FAA reported on the status of the ATFM Annex and LOA. Will be discussed bilaterally.	FAA/State ATM	Work is in progress to update the agreement and coordinate with FAA AGC for signing in Spring 2015. An update at CPWG/19.	May 2015	Open
CP04-31	Improve Efficiencies	Implement use of radar procedures between Magadan ACC and Anchorage ARTCC	State ATM reported that the target date for implementation of radar procedures is 2018.	State ATM	Update to be provided to CPWG/19	May 2015	Open
CP04-35	Improve Efficiencies	Shorten and simplify Form "R" and filing process.	United Airlines proposed that the Russian Federation consider a change that would list the requested "unpaired" entry and exit fixes for a particular flight to reduce the complexity of the R Form process. State ATM responded that a trial had been offered to the airlines by FATA; however, there was a requirement that airlines be equipped with SITA software supporting transmission of attachment files.	Airlines/IATA	IATA sent letter to Airlines but did not receive any feedback on software capabilities. UAL would like to participate in trial. IATA will work on conducting trial with UAL and share results with Airlines.  Airlines ask if Form R can be simplified and list all entries/all exits unpaired. State ATM requested that an official letter be sent to FATA to change the form.  Update to be provided to CPWG/19	May 2015	Open
CP06-02	Improve Efficiencies	Implement Ocean 21 in the Arctic FIR	Anchorage ATOP "Sector 64" planned for implementation 2 <sup>nd</sup> quarter of 2015 with additional testing.	FAA	The FAA will provide an update to CPWG/19.	May 2015	Open

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP07-02	Improve Efficiencies	Add additional entry/exit fixes on the FIR boundaries	State ATM opened two additional entry/exit points on ZAN/Magadan boundary (BARIP, SALET) effective from November 13, 2014. The coordination with the interested airlines is underway to consider the possibility of establishing two more entry/exit fixes (between PINAG and NIKIN and between BARIP and AMATI)	State ATM/FAA	Update to be provided to CPWG/19	May 2015	Open
CP08-12	Improve Efficiencies	Eliminate restrictions where possible	ZAN provided information on restrictions that had been cancelled since the last meeting.	FAA	ZAN noted that the implementation of Ocean 21 would demonstrate improvement in Arctic and Ocean.  Update to be provided to CPWG/19	May 2015	Ongoing
CP10-02	Improve Efficiencies	Provide flow constraint information	State ATM presented information on peak hour operations for various sectors.	State ATM	Capacity standards were increased in sectors and there is no longer issue with crossing traffic. This action is closed.		CLOSED
CP10-08	Contingency Response	Improved contingency collaboration between State ATM and JCAB	JCAB and State ATM agreed on LOA for ATFM. Will continue to work on a bilateral basis. Proposed LOA sent to FATA. Currently under review.	JCAB /State ATM/FATA	Update to be provided to CPWG/19	May 2015	Open.



Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP10-13	Improve Communications	Expand CPDLC/ADS-C capability for Magadan FIR and install CPDLC/ADS-C at Murmansk.	ADS-C/CPDLC services were expanded to Sector "North" of Magadan ACC in 2014  A CPDLC/ADS-C Workstation will also be added at Murmansk ACC in 2018.	State ATM	State ATM to provide an update to Murmansk work station at CPWG/19	May 2015	Open
CP10-14	Improve Efficiency	Provide information on minimum level of service maintained outside operational hours for emergency diversions	State ATM provided updates on Russian enroute alternate airports of interest.  Issue with some airfields being moved to Book 2 of AIPs. Airfields can still be used for emergency situations.  United Airlines requested information on 24 hour contact information.	State ATM IATA	IATA was requested to send an official letter to FATA to clarify the procedure for using the airports included in Book II of the Russian AIP for emergency landings. Updates to be provided to CPWG/19	May 2015	Ongoing
CP11-01	Improve Communications	Advance communications capabilities for the Arctic area	It was agreed at CPWG/12 and CPWG/13 that the CPWG does not have the technical expertise to progress further improvements to communications in the Polar region.	FAA	FAA discussed this at the TRASAS/4 and this action has closed.	Oct 2014	CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP12-04	Improve Efficiencies	Monitor changes to Track Advisory Users Guide	ZAN reported that there had been no changes to the TAUG but there will be two new Russian entry fixes (BARIP and SALET) added November 2014.	FAA	FAA will provide updates on the TAUG at CPWG/19.	May 2015	Open
CP12-06	Improve Efficiencies	Coordination between State ATM and ATMB	During CPWG/12, it was agreed to pursue proposal for a new entry/exit point east of SIMLI. United Airlines suggested that W223 westbound, which is now a domestic route, be made an international route.	State ATM/ATMB  IATA	This is a bilateral issue to be discussed outside of CPWG. State ATM has not been able to meet with ATMB.  State ATM requested that China airlines petition China ATMB to respond to proposal that has been undecided for 6 years. IATA North Asia will coordinate with airlines and Chinese authorities.  An update to be provided at the next meeting.	May 2015	Open
CP12-14	Improve Communications		Based on discussions during CPWG/12, it was agreed to amend the terms of reference of the Comm TF to continue to monitor initiatives and technologies. The CPWG agreed to recommend to the next TRASAS meeting that CPWG's communications activities be limited to a monitoring role.	FAA	FAA to develop recommendation that the CPWG Communications TF be dissolved to present to TRASAS/4	May 2015	CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP13-07	Administration	Request that TRASAS designate an ICAO representative to attend CPWG meetings	The meeting agreed to request that TRASAS designate a representative from ICAO to attend CPWG meetings as an advisor or observer, in order that information can be exchanged with ICAO more frequently.	FAA	FAA extended invitation for ICAO EURNAT Office representative to attend CPWG/19 meeting.	May 2015	CLOSED.
CP14-02	Improve communications	Establish flight data exchange between facilities	<p>State ATM will work with Sapporo to implement AIDC in 2016.</p> <p>Magadan / Anchorage AIDC will be implemented after Sapporo in 2016-2017.</p> <p>Work on AIDC between Vancouver ACC and Oakland ARTCC is ongoing. Some issues were encountered during recent testing and Oakland is making adaptations. Testing expected to resume in February 2015.</p>	State ATM/ FAA/NAV CANADA	Updates to be provided to CPWG/19	May 2015	Open

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP14-07	Improve Communications	Monitor the progress made by the Inter-Regional APAC/NAT AIDC Task Force	FAA provided information on the North Atlantic and Asia/Pacific Regions to provide for harmonized AIDC. APAC/NAT AIDC Task Force has completed work and submitted Version 1 of a APAC/NAT ICD document for review and publication.	FAA			CLOSED
CP14-08	Improve Efficiencies	Improve flexibility of military airspace	NAV CANADA presented information on the efforts underway to cooperatively share the Cold Lake military airspace. Held several meetings – but the military says that area 204 cannot be used during off peak hours.	NAV CANADA	NAV CANADA to provide update to CPWG/19	May 2015	Open
CP14-10	Improve Efficiencies	Provide information on the Oakland FIR trial to merge PACOTS tracks C/E	FAA reported that the trial to merge PACOTS tracks C and E has been temporarily suspended but is expected to resume in February 2015. Main issues revolve around appropriate altitude for direction of flight and what can be accepted by downstream facilities. Of note, most aircraft that would normally file along Track E are using UPRs north of Track E and merging with Track C.	FAA	FAA to provide update at CPWG/19 Moved to PPT.	May 2015	Closed

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP14-11	Improve Efficiencies	Eliminate requirement to flight plan over named or lat/long fixes at 141W	ZAN briefed on a new NOTAM (A0158) written to simplify/reduce FIR NOTAMs. The NOTAM includes restatement of communication requirements. With ATOP implementation, can lessen restrictions in phased process.	FAA	Update to be provided to CPWG/19 on ATOP and continued efforts to eliminate restrictions.	May 2015	Open
CP14-12	Improve Efficiencies	Consider expanding trial for ADS-C CDP to ZAN airspace	FAA provided update on the status of the ADS-C CDP trial. .	FAA	<p>IATA requested that FAA expand the ADS-C CDP trial in ZOA airspace to ZAN airspace. Trial ended in February 2013. ADS-C CDP currently being automated with implementation in 2016.</p> <p>Software scheduled for release in January-February 2016. ICAO process to integrate as a standard on track for publication in 2016. Expected that procedure will be available/implemented in all three FAA Oceanic FIRs in mid-2016.</p> <p>NAVCANADA will not be implementing ADS-C CDP</p> <p>JCAB is studying ADS-C CDP</p> <p>State ATM noted that it was not in their implementation plans</p> <p>Update to be provided CPWG/19</p>	May 2015	Open

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP14-13	Improve Efficiencies	Replacement of Bodo oceanic automation system	Avinor provided an update on the planned replacement for the automation system at Bodo ACC in May 2014. Testing is underway and scheduled for AIRAC cycle March 5, 2015.	Avinor	Update to be provided to CPWG/19	May 2015	Open
CP15-03	Improve Efficiencies	Provide information on RTE and Arctic FIR traffic count data	FAA presented traffic count data over RTE and Arctic FIR fixes.	IATA	<p>IATA requested additional data for traffic counts. The FAA is not able to provide this information until IATA provides specific details.</p> <p>IATA now has the action to provide specifics to FAA by April so that FAA can provide updated traffic count data at the CPWG/19 meeting.</p> <p>Pacific Project Action</p>	May 2015	Open

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP16-05	Develop CPWG Volcanic Ash Contingency Plan	Develop LOA between PK and Fukuoka at the bilateral meeting and also consider opportunities for reroute transitions.  Develop routings from RFE to NOPAC.	JCAB provided information on the temporary LOA that had been developed for VOLKAM14. The LOA includes temporary bi-directional routes to be used for avoidance of volcanic ash. Operators were asked to comment on the routes.  Based on additional study on the proposed routes, JCAB is not able to support those routes.	JCAB State ATM FAA IATA  Based on discussions during meeting, JCAB and State ATM will work to develop new routings (Utilizing routes west of volcanoes and possible relaxation of flight level restriction in R220 ) for exercise.	Provide update on LOA, routes, and VOLKAM15 exercise scheduled for April 16 2015 at the CPWG/19 meeting.	May 2015	Open
CP15-05	Develop CPWG Volcanic Ash Contingency Plan	Consider amending LOAs between adjacent ACCs to introduce provisions on contingency reroutes.	NAVCANADA and Isavia confirmed normal cross-border routing arrangements were flexible and sufficient to support contingency operations.  Isavia and Bodo also have flexible arrangements.	All ANSPs	Because all applicable ANSPs have arrangements in place, this action is closed.		CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP15-06	Develop CPWG Volcanic Ash Contingency Plan	Consider utilizing the ATM VACP Template in the development of Volcanic Ash Contingency Plan for NOPAC and RTE.	State ATM proposes Volcanic Ash Contingency Plan for Trans-East, NOPAC, & PACOTS as template.  JCAB and State ATM expect progress on agreement between Fukuoka and PK FIR in early 2016.	State ATM JCAB FAA/ZAN NAV CANADA	JCAB, State ATM & FAA are reviewing and providing comments to the proposed template.  Draft Guide was also submitted to TRASAS/4 meeting and work effort endorsed.  Work will continue to finalize guide and an update to be provided at CPWG/19.  C.Keohan, ICAO EURNAT Lead for VOLKAM activities request that ANSPs provide operational numbers for affected ACC's.  Also request NAV CANADA involvement and participation in VOLKAM activities.	May 2015	Open
CP15-07	Develop CPWG Volcanic Ash Contingency Plan	Formalize teleconference format and process taking into consideration collaborative decision making (CDM).	JCAB provided information on lessons learned from VOLKAM14 and proposed VOLKAM Sheet to share information.	FAA JCAB State ATM			CLOSED
CP15-08	Develop CPWG Volcanic Ash Contingency Plan	Provide an update from ATMG with respect to NAT Volcanic Ash Contingency Plan.	Isavia reported that the IVATF agreed to transfer responsibility for volcanic ash avoidance or decision to fly or not fly from ATM to Aircraft Operators. An amendment to PANS ATM was approved and is expected to take effect in November 2014	Isavia	Isavia provided information on exercise done and they had issued a NOTAM and the MET office issues SIGMETs based on volcanic ash concentrations. Some concerns regarding SIGMETs. Isavia to provide update on any additional exercises at CPWG/19.	May 2015	Open



Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP15-09	Improve Safety	Streamline the process for establishing danger areas through NOTAM process	<p>Discussions underway to limit negative impact and pre-coordinate danger areas with ANSPs. Need to develop process. Some issues with recent Norwegian Space Agency launch in November 2014.</p> <p>Affected ANSPs will coordinate comments and feedback to space agency and develop harmonized process for the next campaign scheduled for November 2015. Look at process developed by ZOA to ensure harmonization. FAA to coordinate with Commercial Space Office to provide additional information/assistance.</p> <p>ICAO to provide any resulting guidance from the HLSC in February 2015 and Space Forum in March.</p>	NAV CANADA FAA State ATM Norway Isavia ICAO EURNAT	Updates to be provided to CPWG/19	May 2015	Open

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP16-01	Improve Safety	Monitor the outcomes of the ICAO Communications Failure Coordination Group (CFCG)	NAV CANADA, Isavia and the FAA reported on the discussions of the CFCG.	NAV CANADA Isavia FAA	CFCG proposed last assigned altitude for 20 minutes then follow flight plan. CFCG is finalizing comments and recommendations before forwarding to ICAO as a proposal for amendment.		CLOSED
CP16-02	Improve Efficiencies	Provide information on the Oakland FIR trial for UPRs on PACOTS Track F	FAA reported on a trial an operational trial of UPRs in conjunction with Track F. UPR trial in conjunction with Track F has been successful and without issue.	FAA	Update to be provided at CPWG/19 Moved to PPT.	May 2015	CLOSED
CP16-04	Improve Efficiencies	Monitor activities of the User Trajectory Planning (UTP) program	FAA reported on the UTP Pre-Oceanic Phase program. Many of the features requested by operators are under consideration and would address gaps/inefficiencies in Oceanic Region.	FAA	Airlines request more details on UTP program. Please contact <a href="mailto:Thien.Ngo@faa.gov">Thien.Ngo@faa.gov</a> for information on UTP. This action will be closed, pending initiation of the programme, at which point the FAA would brief the CPWG		CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP17-01	Develop CPWG Volcanic Ash Contingency Plan	Harmonized process for CHG Message for In-Flight Status Aircraft	<p>JCAB provided information regarding CHG Message and why their ATC facilities do not accept route change intentions by receiving CHG message when inflight aircraft changes route within Fukuoka FIR. Discussion on how other ANSPs and Airlines do this Based on questions to ANSPs and Airlines, and the variation in answers, it was agreed that there is no harmonized process.</p> <p>Based on discussions during CPWG18 meeting, CP16-06 and CP17-01 will be closed and new action open for CPWG to address.</p>	JCAB State ATM	<p>ANSPs and Airlines to provide responses to JCAB on the following:</p> <ol style="list-style-type: none"> <li>1. Does the Flight Data deal with CHG message or is it automatically updated in flight plan?</li> <li>2. Do dispatchers and the pilot agree with each other when CHG message is sent to ATC facilities?</li> <li>3. Russia and FAA, do you issue re-route clearance when you receive CHG message from in-flight aircraft? If so, how do they issue clearance when the aircraft change its route outside of the controlled airspace?</li> <li>4. Is there any disadvantage when an ATC directly receive a route change request from in-flight aircraft?</li> </ol> <p>Agreement that there was a need to look at a harmonized process.</p> <p>Develop common procedure for use in VOLKAM/15 Trial and provide update at CPWG/18</p> <p>NOTE: This item was noted to have a direct relationship to CP16-06 and should be cross referenced.</p>		CLOSED
CP17-02	Develop CPWG Volcanic Ash Contingency Plan	To conduct planning exercise for VOLKAM15	JCAB provided information on preparatory meeting held in August for VOLKAM15 exercise	State ATM JCAB FAA			CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP17-03	Develop CPWG Volcanic Ash Contingency Plan	Propose operational procedures for New Route from PK FIR to FUKUOKA FIR for VOLKAM15.	<p>Detouring aircraft on Route which merges into R220 at or above FL300. JCAB is proposing 2 procedures:</p> <ol style="list-style-type: none"> <li>1. Route merges into R220 – the detouring aircraft would cross boundary between Japan and Russia after descending at or below FL300 in PK.</li> <li>2. Detouring aircraft merges into R220 at or above FL300 and aircraft cruising on R220 at same altitude has to be rerouted on R580 to avoid duplicate altitude.</li> </ol> <p>Propose New Route from PK FIR to Fukuoka FIR west-bound NIPPI-OTLER and NIPPI-NETRI.</p> <p>Based on discussions, propose OMOTO R580 to R220 then NETRI.</p>	IATA State	<p>IATA to provide feedback on this procedure.</p> <p>Request State ATM to coordinate with PK ACC if detouring aircraft can descend at or below FL300 in their airspace and enter Fukuoka FIR.</p> <p>Review for possibilities for determining permanent routes between Fukuoka and PK.</p> <p>Update CPWG/18 on 2 procedures that were proposed.</p> <p>JCAB to have sidebar to further discuss proposed route between RFE and NOPAC for VOLKAM exercises in extraordinary circumstances and only for volcanic ash avoidance.</p>	May 2015	CLOSED

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP17-05	Contingency Plan		Isavia provided IP on its HF Communication Contingency Plan.  Discussion on other ANSPs plans took place during ANSP meeting. Individual ANSPs have plans in place.	ANSPs	No additional action needed.		CLOSED
CP17-06	Improve efficiencies		ATS Route B915 provides significant time and fuel savings but because of military use of FIX LANRI to FIX FX, normal NOTAMs are not issued resulting in last minute changes, reroutes, etc.	State ATM	FL310 and higher will be published and used without restrictions. NOTAM NA3155, August 28, 2014, announced that numerous altitudes were now available on B915		CLOSED
CP17-07	Improve efficiencies		Propose new route LUMES G73 UB B915 FI G212 HAB B150 BIRBO B723 ODEKA R213 MAGIT	State ATM	Since this proposal was put forward as an alternative to making available unrestricted flight levels on B915, it was decided to close this item (please refer to CP17-06) .		CLOSED
CP17-08			Propose amendments to 3 current routes:  IRKAN to BANIT  Amend BANIT..ABOMA to DCT to ABOMA  TERBO...BERBO or TERBO...PENOK	State ATM	Review Proposal and provide update at CPWG/18	May 2015	CLOSED Moved to ATS Route Catalogue
CP17-09			UAL proposes new connection from RUTIN/BALOM to OLDEP to optimize NIKIN to SULOK connection.	State ATM	Review Proposal and provide update at CPWG/18	May 2015	CLOSED Moved to ATS Route Catalogue

Action Number	Capacity Enhancement Goal	Supporting Goal Initiatives	Information/Status	Responsible Organization	Action Pending	Action Due	Status
CP17-10			State ATM requests FAA to look at lack of departure messages being provided to Russian and JCAB	FAA	FAA worked with State ATM to determine if issue was automation or AFTN address. FAA Memo sent to Centers directing departure messages to go to State ATM and JCAB.  State ATM and JCAB to provide status on receipt of departure messages at CPWG/19.	May 2015	Open
CP18-01	Develop CPWG Volcanic Ash Contingency Plan	To conduct planning exercise for VOLKAM15	Provide update on the April 2015 VOLKAM15 exercise	State ATM JCAB FAA	Provide update to CPWG/19	May 2015	Open
CP18-02		Harmonized process for coordination of route changes to In-Flight Aircraft and issues with use of CHG messages	ANSPs to provide information on process or procedure used for accepting CHG Message and RTE CHG.	All ANSPs IATA	Develop a chart that illustrates how each ANSP processes change messages in various flight states and how route changes are processed to subsequent facilities. This consolidated information will be used for discussion and determination of harmonized process at next CPWG/19 meeting. An Advance copy will be provided to IATA to discuss during their regional coordination group meeting in early March 2015.  Document to be provided to CPWG19 for discussion.  IATA to provide update on their discussions from regional coordination meeting.	February 2015.  May 2015	Open

### Pacific Project Team/8 Action Item List

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP02-04	Consider implementation of flexible tracks between approved entry and exit points within the RTE region on a daily basis	State ATM provided information on the regulatory and legislative requirements for operating off-routes and publishing routes. Some flexibility could be provided over the high seas under certain situations.  UAL presented information on a paper trial conducted. Results indicated the potential for some time and fuel savings, however they were inconclusive.	IATA	State ATM is developing an implementation plan for UPRs, including timelines. This is a large exercise however State ATM will endeavor to provide an update at PPT/9.	May 2015	Open
PP02-05	Realignment of the NOPAC	JCAB and FAA will continue to pursue options for realignment of the NOPAC in conjunction with the Pacific Project.	JCAB/FAA/IATA	JCAB continues to study restrictions on Track 2 and will introduce a study to remove some of the restrictions IATA will provide input from airlines as and when required.  Close Action. Work on PACOTS continues as part of IPACG and updates will be provided as needed to PPT. Additional work on NOPAC will be considered following completion of seamless airspace template and determination of PPT work program.	Dec. 2014	<del>Open</del> Closed

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP04-01	Eliminate constraints used for track generation	FAA/JCAB to provide details of variables and track generation rules to be reviewed collaboratively	FAA/JCAB/IATA	FAA had discussions at OWG to look at changing the track generation times, but it did not appear to be feasible to the airlines. The airline suggested resolution would have been earlier in the midnight shift which would have been a workload and human resource issue for FAA. IATA will canvass airlines and develop a consolidated airline position on the optimum track generation time for the FAA to consider.  Close action. Discussions on changes to track generation times or PACOTS should be held in conjunction with IPACG and/or OWG. Updates to PPT as needed.	Dec. 2014	<del>Open</del> Closed
PP04-02	Eliminate constraints for flight planning	Collect and review information on airspace constraints, justification and any plans to eliminate them.	FAA/JCAB/IATA	Restrictions are already listed by NOTAM. IATA aim to have a graphical representation and prioritization list of those to eliminate for the next PPT meeting.  Close action. Add to actions re- seamless airspace chart	Dec. 2014	<del>Open</del> Closed
PP05-01	Improve flight planning and eliminate constraints	IATA and the airline operators asked if it were possible to get early intent data from the DOTS+ system to assist with flight planning and track balancing.	FAA	DOTS+ is in a system maintenance only mode. The provision of early data is under development as part of the User Trajectory Planning program.  Close action. Early intent data unlikely to be available prior to implementation of UTP/OTTM.	Dec. 2014	<del>Open</del> Closed



Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP05-02	Collect NOPAC traffic count data	IATA asked if it were possible to get more detailed information on NOPAC traffic data, specifically, an hourly breakdown of traffic and traffic count data based on day of week.	FAA/IATA	<p>ZAN has traffic count information, but would like to know exactly what is desired by IATA/the airlines. IATA agreed to provide more specific details.</p> <p>Close action and open as PP08-02. Both JCAB and ZAN have data available, however, both have requested more details about what is specifically requested and how/what that data will be used for. IATA to provide more details prior to PPT/09.</p>	Dec. 2014	<del>Open</del> Closed
PP05-03	Improve efficiencies	IATA and operators requested that the FAA evaluate the possibility of developing "best equipped, best served" flex tracks in the Pacific.	FAA/IATA	<p>Creation of such limited access tracks would require FAA rulemaking, which would be a 3-5 year process and may not ever be approved. JCAB indicated a similar timeframe if a rule change is required. IATA will reconsider and formalize the request.</p> <p>Close action. Work is ongoing as part of IPACG. Reports to PPT as needed.</p>	Dec. 2014	<del>Open</del> Closed
PP05-04	Establish Core Pacific Project Team	IATA and FAA to work with other PPT members to establish a core team to narrow the focus of the PPT and avoid duplication of efforts.	Pacific Project Core Team	<p>First telecon has been held however the lack of a concrete work program has been a limiting factor in terms of the efficacy of the team.</p> <p>Close action. IATA and FAA to take action to coordinate between PPT meetings and will coordinate with appropriate PPT members as needed.</p>	Dec. 2014	<del>Open</del> Closed

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP05-05	Determine baseline capabilities	To narrow and streamline the work of the Pacific Project, a determination of current capabilities and capacities is desired.	Pacific Project Core Team	IATA is compiling the information and will present a table for consideration at PPT/7  Closed action and open PP08-01. Seamless Airspace Chart added to CPWG work program to identify and update capabilities.	Dec. 2014	<del>Open</del> Closed
PP05-06	Develop work program	Core team to determine a plan of action with desired goals.	Pacific Project Core Team	IATA to present a draft work program with timelines to the PPCT for consideration after IPACG in February 2014.  Close action and re-open as part of PP08-01. Develop seamless airspace chart and conduct gap analysis to develop plan of action	Dec 2014	<del>Open</del> Closed
PP06-01	FAA Meeting Representation	IATA requests that an Oakland Center representative is added to future PPT/CPWG meetings.	FAA	FAA will assess the request.  FAA cannot support the resource allocation.	Dec 2014	<del>Open</del> Closed
PP06-02	ZAN/ZOA boundaries changes that might allow for the reduction of flight planning restrictions.	ZAN and ZOA are looking at this and working on possible airspace changes to allow 30/30 to be used in airspace in the Kodiak area.	FAA	There should be a resolution in early 2014. ZAN representative to update the next OWG and PPT/7.  Close action. Cross-boundary 30/30 between ZOA and ZAN implemented.	Dec. 2014	<del>Open</del> Closed
PP06-03	Zero track load times	State ATM would like ZAN to continue to work toward zeroing track load times for all routes.	FAA	ZAN to continue assessing opportunities.	May 2015	Open

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP06-04	Expansion of radar transfers to improve lateral/longitudinal separation requirements.	IATA asked that ANSPs look at boundary coordination procedures and moving toward radar handovers where possible.	FAA/State ATM	<p>Radar handovers between ZAN and Magadan are planned but are dependent upon SSR infrastructure improvements by State ATM. This work is planned with a 2015-16 timeframe.</p> <p>Included in CPWG work program. Updates on Providenia radar provided to CPWG (CP04-31)</p> <p>Current/planned surveillance captured in seamless airspace template in action PP08-01</p>	Dec. 2014	<del>Open</del> Closed
PP06-05	Establish transitions from Russian airspace to R220.	As a result of outcomes from VOLKAM13, and requests from airlines, JCAB and State ATM have engaged in bilateral discussions regarding transitions from Russian airspace to NOPAC/R220.	JCAB/State ATM	<p>JCAB and State ATM have prepared a draft LOA for use during volcanic exercise VOLKAM14 and will continue dialogue to evaluate establishing something more permanent.</p> <p>Included in CPWG work program <i>Safety – Making contingency response information available, including volcanic activities</i></p> <p>CPWG Action Item CP10-08 CPWG Action Item CP15-04 thru 08</p>	Dec 2014	<del>Open</del> Closed
PP06-06	Start R220 and R580 further west and allow UPRs to those start points.	Currently the routes start very close to Alaska and the suggestion is to start about 500 miles farther west, closer to Shemya.	FAA/State ATM	<p>State ATM said that it could be considered. Could start at <b>NATES</b> and <b>ONEAL</b> but would not want to start too far west of St Paul. ZAN will discuss internally. There is no impact on P-K traffic.</p> <p>Close action. IATA will resubmit request if needed</p>	Dec. 2014	<del>Open</del> Closed

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP06-07	Review of westbound NOPAC structure.	IATA requests that the FAA and State ATM review the westbound structure of the NOPAC and consider moving R220 further north,	FAA/State ATM	<p>There has been discussion between ZAN and P-K on the LOA to utilize that airspace, but no consideration of moving R220. This would require realignment of the airspace and it would also need to be classified as RNP4 airspace. ZAN need to look at a way to accomplish this task. State ATM said this is not feasible at this time.</p> <p>Close action. FAA is evaluating change to R220 as an RNP-4 only airway in the Anchorage FIR. Updates provided to PPT as information becomes available.</p>	Dec. 2014	<del>Open</del> Closed
PP06-08	TRASAS4	TRASAS4 will be held in Bangkok 24-28 March 2014.	FAA/IATA	<p>FAA and IATA will collaborate on a submission/s to TRASAS on behalf on the PPT.</p> <p>Close action. PPT is a sub-group of CPWG and updates are provided as part of the CPWG actions.</p>	Dec. 2014	<del>Open</del> Closed
PP07-01	UPR Expansion in the RTE		State ATM/IATA	State ATM to provide IATA with definition of sample user routes and IATA will provide sample plans and benefits to quantify case/need for UPRs. (ie. savings data for each UPR compared to traditional routes).	May 2015	Open
PP08-01	Develop PPT work plan	Determine current and future planned capabilities of ANSPs to assist with gap analysis and development of a clear roadmap for the work of the Pacific Project Team.	All ANSPs	FAA to send a Seamless Airspace Template to all ANSPs to complete.	Feb. 2015	Open

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP08-02	Collect traffic count data for Arctic, Anchorage/RTE, and NOPAC	IATA has requested more detailed traffic count information for the NOPAC, Anchorage/RTE, Arctic fixes. Specifically, a breakdown of traffic by hour and days of the week is requested.	IATA/ANSPs	Both JCAB and ZAN have data available, however, both have requested more details about what is specifically requested and how/what that data will be used for. IATA to provide more details prior to PPT/09.	March 2015	Open
PP08-03	UPR Expansion	IATA request that the FAA consider allowing UPRs westbound to Russian FIR boundary fixes on both the Magadan and Petropavlovsk boundaries. The relevant fixes are ERNIK, RUSOR, BESAT, BAMOK, KOKES, LUMES, and KUNAD. If possible the UPRs would not require using any ATS routes within ZAN airspace.	IATA/FAA	IATA to refine the request and provide ZAN with additional details for their consideration.	May 2015	
PP08-04	UPR Expansion	IATA request that Russia consider an extension of the UPR expansion proposal in PP08-03 by allowing UPRs westbound from the Anchorage FIR boundary (LAT/LONs) to named waypoints along ATS routes within Russia Oceanic airspace.	IATA/State ATM	State ATM to consider.	March 2015	Open

Action Number	Goal	Information/Status	Responsible Organization	Action Pending	Action Due	Status
PP08-05	Improve Efficiencies	Provide information on the Oakland FIR trial to merge PACOTS tracks C/E	FAA	FAA reported that the trial to merge PACOTS tracks C and E has been temporarily suspended but is expected to resume in February 2015. Main issues revolves around appropriate direction for altitude of flight and what can be accepted by downstream facilities. Of note, most aircraft that would normally file along Track E are using UPRs north of Track E and merging with Track C. UPR trial in conjunction with Track F has been successful and without issue.	March 2015	Open
PP08-06	Improve Efficiencies	Provide information on the Oakland FIR UPR trial with PACOTS Track F	FAA	. UPR trial in conjunction with Track F has been successful and without issue.	March 2015	Open

**The Eighth Meeting of the Pacific Project Team (PPT/8) Meeting Report**  
**16 December 2014**  
**ICAO EUR/NAT Headquarters**  
**Paris, France**

The Pacific Project meeting was held on Tuesday afternoon 16 December 2014 from 1300L to 1700L and was attended by Air Navigation Service Providers (ANSPs) from the United States, Canada, Russia, and Japan along with representatives from a number of international air carriers and International Air Transport Association (IATA). The meeting was co-chaired by Mr. Blair Cowles of IATA and Mr. Steve Pinkerton of the FAA.

Below are notes and actions resulting from the meeting.

**1. Welcome and Introductions**

- a. Blair Cowles, IATA, and Steve Pinkerton, FAA, welcomed participants.
- b. Self-introductions
- c. Reviewed proposed agenda – no comments were offered

**2. Pacific Project Team Members Updates**

**FAA**

Anchorage Center advised that they were now permitting unrestricted user preferred routes (UPRs) throughout the Anchorage Oceanic FIR to the Fukuoka FIR boundary at or above FL400 for westbound and that they are seeing the Boeing 787 as the primary aircraft type. While UPR use has been expanded, it was noted that most other types of aircraft were filing along Pacific Organized Track System (PACOTS) routes. A question about expanding this provision to eastbound aircraft was posed and Anchorage noted it had yet to be examined but it was a possibility. JCAB noted that they may consider expanded UPR use above FL400 but they would need study and work with Anchorage to determine what may be possible. An update is expected at PPT/9.

**State ATM Corporation**

State ATM opened two new fixes (SALET and BARIP) along the boundary with Anchorage Center in the Arctic in October 2014, expanding the number of cross-polar routes available to 16. They noted that they were seeing heavy use of the two new fixes and increased use of the new routes by Ethiad, Emirates, Saudi, and Hainan Airlines. Three more flight levels were added to ATS Route B950 which has increased its usage. State ATM also noted its ongoing collaboration with JCAB to improve flexibility with contingency routes between the North Pacific (NOPAC) and Russian Far East (RFE) airspace. In conjunction with a request by IATA and the aircraft operators to expand UPRs into Russian airspace, State ATM requested that IATA provide them with efficiency estimates to support their request. State ATM stated they had yet to receive these items but was looking forward to receiving them to facilitate the request. United Airlines noted the increased flexibility created by adding BARIP and SALET and thanked State ATM for their efforts.

### **Japan Civil Aviation Bureau (JCAB)**

JCAB briefed that they expected begin normal operation of UPRs on 8 June 2015, as advised on an Aeronautical Information Circular (AIC), as part of routes between Tokyo and Hawaii and Tokyo and Los Angeles in conjunction with the Dynamic Airborne Reroute Program (DARP). This type of UPR routing was recently started between Tokyo and San Francisco and future routes are planned for use beginning in September 2015. It was noted by JCAB that, given RNP-4 equipage in both the Central Pacific (CENPAC) and NOPAC is 90% or greater, they were giving consideration to establishing RNP-4 preferential routes. These preferential routes will be coordinated with the FAA prior to any implementation.

### **NAV CANADA**

The PPT welcomed Mr. John Reid from Vancouver ACC to the meeting. Vancouver discussed a number of initiatives including introduction of a conflict prediction tool that will roll out in two phases beginning in Spring 2015. Conflict prediction will support UPRs between Vancouver ACC and Oakland Center. Vancouver will also begin to utilize ADS-C reporting in late 2015 and it is expected that they will be able to accept aircraft with reduced longitudinal separation from Oakland Center. Vancouver also noted ongoing efforts to implement AIDC with Oakland Center, which is expected to occur in February 2015.

Edmonton ACC noted that their UPR project is nearing completion and that route consultation has been completed with almost all customers. This process will allow Edmonton to provide Anchorage Center with various route configurations as Anchorage requires.

### **3. Developing a Roadmap to Achieving the Goals of the Pacific Project (WP/05)**

The FAA noted that the goal of the Pacific Project is to expand UPRs and develop “seamless, homogenous airspace” for aircraft traveling between North America and Asia. One of the difficulties encountered to progressing these goals has been lack of a defined roadmap with short, mid, and long-term goals. WP/05 suggested dividing Pacific Project airspace into four distinct geographical regions- Arctic, Anchorage-RFE, NOPAC, and PACOTS/CENPAC. Each geographic region would be analyzed separately to determine what potential improvements may be realized and establish timeframes to when those improvements may be possible. This would allow the PPT to focus its efforts and develop a clear working program. In order to prevent duplication of efforts for ongoing work of the Informal Pacific Air Traffic Coordination Group (IPACG) and Oakland Oceanic Work Group (OWG), the FAA suggested that the PACOTS/CENPAC analysis should be limited to current/future capabilities and current UPR status. The FAA proposed use of a modified Seamless Airspace Chart to track ANSP current and future capabilities, which the ANSPs all agreed to update.

### **4. TRASAS/4 Conclusions and Airspace User’s Recommendations (WP/04)**

IATA expressed appreciation for the support of TRASAS for the continued work of the PPT. The paper offered that, in addition to the geographical divisions offered in WP/05, initiatives should be tracked as immediate, near-term, longer-term, and future state (an explanation to what each category means is contained within WP/04). IATA offered some proposed initiatives for consideration, including expansion of UPRs and replacement of the NOPAC with an OTS. IATA requested that JCAB and FAA gather NOPAC boundary point usage data- both FAA and JCAB advised that IATA would need to provide a more specific, detailed request including specific dates, routes, etc. IATA agreed to provide such information. In reference to the request to replace the NOPAC with an OTS,



Anchorage Center requested more detail and noted the difficulties in trying to implement such a scheme given the variety of city pairs and ANSP differences. More discussion is expected on these proposals at PPT/9.

**5. Pacific Project Team/7 Action Items Review (WP/03)**

This action was deferred to take place following the PPT/8 meeting based upon proposals in PPT WP/05. The Action Item list was reviewed and updated during the close of CPWG/18 meeting and can be found in **Attachment A**.

**5**

**6. Next PPT Meeting**

The next PPT meeting is scheduled for 12 May 2015 in Tokyo, Japan and will be expanded to include the full day. IATA proposed a half-day workshop on flight planning with the aircraft operators and all CPWG ANSPs. It was felt that there would be a large operator presence at the meeting and the opportunity was ideal to discuss the nuances of flight planning through various portions of airspace. Blair and Steve thanked everyone for their participation and PPT/8 was closed.

**Eighteenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/18)**

(Paris, France 16-19 December 2014)

**Agenda Item 6: ATS Route Catalogue**

**AIR TRAFFIC SERVICES ROUTE CATALOGUE**

(Presented by STATE ATM CORPORATION)

**SUMMARY**

This working paper presents status and information on route proposals since the Seventeenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/17) for the CPWG information and discussion.

**1. Introduction**

1.1 Since the Ninth meeting of the CPWG, the State ATM Corporation has provided an Air Traffic Services (ATS) Route Catalogue for the Polar Region for discussion and use during the meetings.

**2. Discussion**

2.1 **Attachment A** is the proposed ATS Route Catalogue for the CPWG's discussion and consideration.

**3. Recommendation**

3.1 The meeting is invited to:

- a. review the information contained in this Working Paper;
  - b. recommend changes or additions to the ATS Route Catalogue at **Attachment A**.
-

Paris, France  
December 16-19 2014

## ATS ROUTE CATALOGUE

### Section 1. Proposed Cross Polar Route Segments (CPRS)

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
1	<b>CPRS/2</b>	RAMEL (8430.0N 16858.4W) - 8456.2N 16653.4E - 8331.1N 12736.3E - BESON (7921.0N 10431E) (bidirectional use)	State ATM Corporation. 2008	a) Implementation will be possible only after elaboration of procedures between oceanic sectors of Magadan. Murmansk ACCs and Anchorage ARTCC; b) Implementation is unreasonable. No stable communications. Safety concerns.		RUS USA	Implementation is deemed unreasonable.
2	<b>CPRS/3</b>	NALIM (8620.4N 16858.4W) - KUBON (8000.0N 12452.9E) - IRMAK (7601.4N 11830.0E) - ROMUL (7355.5N 11557.3E) - SALAK (7158.0N 11407.0E) - LALEN (6930.0N 11252.9E) - OLEMU (UERO 6831.0N 11228.0E) - RULAT (UERP 6624.0N 11202.0E) - IRBIS (6455.4N 11056.7E) - GIBRI (6318.6N 10953.4E) - DORIP ( 6054.2N 10831.5E) - PEKUN (6002.0N 10805.0E) - CI (Ust-Kut NDB) - URAMO (5542.9N 10526.0E) - MX (ZHIGALOVO) - then along the existing airways (bidirectional use)	State ATM Corporation. 2008	a) Open a new cross polar route; b) 8620.4N 16858.4W - 7600.4N 11839.6E segment is approved and ready for implementation; c) SALAK - LALEN - OLEMI - RULAT segment is under review and international coordination; d) IATA Top Priority		RUS USA	Published as G112 on Nov 1, 2010 ( NALIM (8620.4N 16858.4W) - KUBON (8000.0N 12452.9E) segment is unavailable before Dec 16, .2010
3	<b>CPRS/12</b>	MAGUN (8500N 03200E) - BESED (8133.0N 05535.1E) - ANODI (7730.0N 06600.0E) - PINOG (7340.1N 06911.4E) - REFRI (6728.6N 07128.0E) - GIMIR (6528.9N 07242.0E) - R348 (H=8600 - 16100) - GISUR (6120.6N 07324.2E) - 5855.4N 07345.9E - ML (Chapayev NDB	State ATM Corporation. 2009	a) Establish a new route for flying from India, Pakistan and UAE to North America East Coast; b) Approved. ready for implementation after resolution of comm. Issues between Murmansk and Mys Kamennyi;		RUS ISL	Published as G706 (NOTAM A3432/10) on Jul 1, 2010

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
		5615.0N 07357.0E) - A302 - G487 – DAKIN (5409.5N 07224.3E) (bidirectional use)		c) Will be assigned R706 designator			
4	<b>CPRS/13</b>	RIMAG (6828.0N 07335.8E) - OLDEM (6721.0N 07310.2E) – (6638.0N 07255.0E) - GONOK (6620.1N 07250.4E) - GIMIR (6528.9N 07242.0E) – LEBUL (6450.7N 07148.6E) - RILIS (6321.6N 06954.7E) - URMAN (6146.2N 06806.9E) – ATREM (6058.6N 06714.0E) – BAGEN (6638.0N 07255.0E) – LUGIK (5943.0N 06556.0E) (bidirectional use)	Emirates Airlines	a) Open a new route; Approved and ready for implementation		RUS	Published as A947 on Nov 1, 2010
5	<b>CPRS/14</b>	SORLI (6228.0N 06602.0E) - BELEG (6341.3N 06642.0E) - MASUL (6455.1N 06639.8E) - SH (Salekhard VORDME 6635.3N 06636.4E) - GOPUS (6726.1N 06639.2E) - ADERA (6851.9N 06644.3E) - TUMOK (7113.0N 06654.5E) – LUGOT (7202.3N 06649.5E) - ANODI (7730.0N 06600.0E) (unidirectional use to ANODI)	Emirates Airlines	a) Transition from a new Crosspolar route; b) Approved and ready for implementation; c) Will be assigned G359 designator		RUS	Published as G359 (NOTAM A3429/10) on Jul 1, 2010
6	<b>CPRS/15</b>	PIREL (8000.0N 03500.0E) – ANODI (7730.0N 06600.0E) – then on B483 (bidirectional use)	State ATM Corporation. 14.05.2009	a) Open a new routing from China to North America; b) approved and ready for implementation. c) Will be assigned R705 designator		RUS NOR	Published as R705 (NOTAM A3427/10) on Jul 1, 2010
7	<b>CPRS/16</b>	ANODI (7730.0N 06600.0E) - MELAM (07610.7E 7657.0N) - TINEM (7459.4N 07610.7E) – DOSON (7331.0N 08022.9E) (bidirectional use)	State ATM Corporation. 14.05.2009	a) A new transition from Crosspolar route; b) ANODI - MELAN approved and ready for implementation			Published as R705 on Nov 1, 2010
8	<b>CPRS/17</b>	MX (ZHIGALOVO NDB 5448.0N 10509.0E) – GUSIN (5106.0N 10614.0E) (bidirectional use)	State ATM Corporation. 14.05.2009	a) Shorten the route by 15 km b) Approved for implementation as a route by coordination with ATC; c) Will assigned B934 designator		RUS	Implemented on March 11, 2010 (NOTAM A0404/10)
9	<b>CPRS/18</b>	NIBUL (5913.1N 06239.8E) – 5738.2N 06147.9E – EKB (Yekaterinburg/Koltsovo VORDME 5644.6N 06047.9E) (between 2100-7500 m unidirectional to	State ATM Corporation. 14.05.2009	a) Shorten the route by 13 km; b) Under review		RUS	Published as G552 on May 05 2011

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
		NIBUL. between 8100-15100 m bidirectional)					
10	<b>CPRS/19</b>	RIVAS (7140.8N 08425.3E) - SIVDI (6951.1N 08736.9) – TESLA (6720.5N 09155.5E) – SAKAT (6526.6N 09432.4E) – OKASA (6225.8N 09728.3E) – KOSUM (5756.3N 10044.6E) - BRT (Bratsk VORDME) (bidirectional use)	Continental Airlines April 2008	a) Open up a route for flying from South-East Asia to North America; b) Under review		RUS	Published as R705 on Nov 1, 2010
11	<b>CPRS/20</b>	DAKIN (5409.5N 07224.3E) - ML (Chapayev NDB 5615.0N 07357.0E) - NJC (Nizhnevartovsk VORDME 6056.6N 07628.1E) (bidirectional use)	Emirates Airlines 2009	a) Open up a route for flying from Middle East to North America; b) Under review		RUS	Published as G715 on Nov 17, 2011
12	<b>CPRS/21</b>	BEBIR (6355.2N 06501.8E) - GUDIR (6734.5N 07001.6E) - NIDRA (7127.5N 07708.7E) (bidirectional use)	Emirates Airlines 2009	a) Shorten the existing route b) Under review		RUS	Published as G497 on Nov 17, 2011
13	<b>CPRS/22</b>	8530.0N 16858.6W	FAA December 4. 2009	a) Open up a new entry fix for Crosspolar routes b) Under review		RUS USA	4 <sup>th</sup> quarter 2010 NPRS/27
14	<b>CPRS/23</b>	8330.0N 16858.6W	FAA December 4. 2009	c) Open up a new entry fix for Crosspolar routes a) Under review		RUS USA	4 <sup>th</sup> quarter 2010 <b>NPRS/28</b>
15	<b>CPRS/24</b>	7800.0N 16858.6W	FAA December 4. 2009	d) Open up a new entry fix for Crosspolar routes a) Under review		RUS USA	4 <sup>th</sup> quarter 2010 <b>NPRS/29</b>
16	<b>CPRS/25</b>	7300.0N 16858.6W	FAA December 4. 2009	e) Open up a new entry fix for Crosspolar routes a) Under review		RUS USA	4 <sup>th</sup> quarter 2010 <b>NPRS/30</b>
17	<b>CPRS/26</b>	NIKIN (8100.0N 16858.6W)	FAA December 4. 2009	a) Relocate NIKIN b) Under review c) Relocation of NIKIN is unreasonable		RUS USA	4 <sup>th</sup> quarter 2010 Realignment is unjustified
18	<b>CPRS/27</b>	LISKI (7000.0N 16858.6W)	FAA December 4. 2009	d) Relocate LISKI e) Under review a) Relocation of LISKI is unreasonable		RUS USA	4 <sup>th</sup> quarter 2010 relocation of the entry fix is unnecessary
19	<b>CPRS/28</b>	833000N1685823W - 740039N 1360232E - ...	State ATM Corporation.	a) Open a new cross polar route; a) Under review		RUS USA	Published as G493 and G812 on

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
		a) NA (Nizhneyansk NDB 7125.0N 13608.0E) – G226; b) GIKSI (7141.7N 12854.0E) – G491 (B489. G493) (bidirectional use)	09.02.2010				Nov17, 2011
20	<b>CPRS/29</b>	AMATI (780000N 1685824W) - GILOD (755416N 1720106E) - LUNOG (720705N 1565953E) - NOGDA (711205N 1544019E) – OTNIR (690000N 1500037E) - SIPVI (652256N 1441620E) - NERPA (643256N 1430619E) (двухсторонняя)	State ATM Corporation. 09.02.2010	b) Open a new cross polar route; a) Under review		RUS USA	Published as B806 on Okt 18, 2012
21	<b>CPRS/30</b>	7300.0N16858.4W – LURET (7037.5N 14753.8E) – R351 (B933 . G7. G494 . G495. G806) (bidirectional use)	State ATM Corporation. 09.02.2010	a) Open a new cross polar route; b) Under review c) unacceptable at the moment		RUS USA	unacceptable at the moment
22	<b>CPRS/31</b>	ORVIT – 7500.0N 17000.0E -6500.0N 15300.0E – BANOT - .. B223 - LUMIN	Continental Airlines April 2010	a) New York – Tokio traffic; b) distance saving- 35.8 м.м. c) accepted for review d) unacceptable at the moment		RUS	unacceptable at the moment
23	<b>CPRS/32</b>	ORVIT - 7700.0N 18000.0E - 7000.0N 16100.0E - 6500.0N 15500.0E - 6000.0N 15100.0E – ROMEM .. B337 - ANIMO	Continental Airlines April 2010	a) New York – Tokio traffic; b) distance saving - 40.2 м.м. c) accepted for review		RUS	unacceptable at the moment
24	<b>CPRS/33</b>	DEVID (B480) - GIKSI .. G491 or G493 or B489	United Airlines April 2010	a) Transition routes for flying between Mid West US/US East Cost and Asia b) Accepted for review		RUS	unacceptable at the moment
25	<b>CPRS/34</b>	a) RAMEL (G491) - TAKUN (G226); b) PETUL - RUTIN (G226); c) UNELI (G491) - HA (G226)	United Airlines April 2010	a) Transition routes for flying between Mid West US/US East Cost and Asia b) Accepted for review		RUS	unacceptable at the moment
26	<b>CPRS/35</b>	a) NIKIN (G226) - UNELI; b) TAKUN (G226) - TIGNA (G491); c) HA (G226) - TEMGA (G491)	United Airlines April 2010	a) Transition routes for flying between Mid West US/US East Cost and Asia b) Accepted for review		RUS	unacceptable at the moment
27	<b>CPRS/36</b>	a) ORVIT (G494) - TAKUN (G226); b) DILSA - RUTIN (G226)	United Airlines April 2010	a) Transition routes for flying between Mid West US/US East Cost and Asia b) Accepted for review		RUS	unacceptable at the moment

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
28	<b>CPRS/37</b>	ANODI-ABERI	Emirates Airlines 19.05. 2010	a) Accepted for review b) Reviewed. Implementation is possible.		RUS	Published as G359 on Sep 22, 2011
29	<b>CPRS/38</b>	a) NELTI-A299-DONUS-TINRI далее G359 or b) NELTI- TINRI .. G359	Emirates Airlines 19.05. 2010	a) Accepted for review.		RUS	under review
30	<b>CPRS/39</b>	a) W104 TARSA-NOR b) W98 DOSON-KUTET	Continental Airlines April 2010	a) assign an international status b) streamline DAKIN – DEVID route for Delhi/Mumbai – Newark daily flights c) transition from DEVID		RUS	Published as a) R200 as b) G498 on Nov17, 2011
31	<b>CPRS/40</b>	B358 LANEP – IKADA	British Airways 17.01.11	Remove flight level restrictions between FL350-530		RUS	This route is excluded.
32	<b>CPRS/41</b>	LURUN (852500N 1685824W) - TUSAT (833607N 1543003E) - UNTEK (791121N 1340410E) - NIGES (750546N 1265137E) - RANEN (735405c 1252913E) - NESPA (715403N 1233405E) - MOPUL (693331N 1232755E) - GANPA (664703N 1232204E) - ARLAG (651308N 1254435E) - SUBOS (635738N 1272559E) - TAGIL (631602N 1282035E) - Yakutsk VOR/DME (UTS) (620533N 1294705E) (двухсторонняя)	State ATM Corporation. 09.02.2010	a) Open a new cross polar route; b) Under review		RUS USA	Implemented as R494 on Oct 18, 2012
33	<b>CPRS/42</b>	GIMON – NIRUT (76N035E)	2012	Purpose: for flights from India to existing routes to GIMON continue in the North America		RUS NOR	Published as A840 on March 07, 2013
34	<b>CPRS/43</b>	GIMON – AGATA (78N035E)	2012	Purpose: for flights from India to existing routes to GIMON continue in the North America		RUS NOR	Published as A841 on March 07, 2013
35	<b>CPRS/44</b>	ANODI – KOMEL (7730N035E)	2012	Use as a new Crosspolar route for flying from North America to Southeast Asia		RUS NOR	Published as A839 on March 07, 2013
36	<b>CPRS/45</b>	SIMLI-G494-B331-W205-WZ	2013	Reduce mileage		RUS	Will be published as G494, A803 on

Item	Reference	Route description	Proposed by	Objectives/Comments	Benefits	FIR	Target Dates
1	2	3	4	5	6	7	8
							September 19, 2013
37	<b>CPRS/46</b>	NERPA (643256N 1430619E) –FA (Yekimchan) (530807N 1324953E) – MAGIT (474131N 1310900E) Unidirectional traffic from FA to MAGIT	2013	Extend the existing Crosspolar route		RUS	Will be published as B806 on September 19, 2013
38	<b>CPRS/47</b>	WZ (503808N 1280207E) – PARIS (512001N 1300004E) - FA (530807N 1324953E). Unidirectional traffic from WZ to FA	2013	Establish parallel routes		RUS	Will be published as A803 on September 19, 2013
39	<b>CPRS/48</b>	493236N 1281936E-AMERA- WZ (unidirectional traffic to WZ)	IATA	Establish parallel ATS routes (G494 is unidirectional to SIMLI)		RUS CHN	Under review and coordination. Negotiate with China, in different formats (IATA, ICAO, etc.)
40	<b>CPRS/49</b>	RITEK – 495025N 1182854E - HAILAR	IATA	Establish an additional entry/exit point	Reduce mileage	RUS CHN	Under review and coordination. Negotiate with China, in different formats (IATA, ICAO, etc.)
41	<b>CPRS/50</b>	SALET (7957N 16858W) – RODOK then along G495	State ATM Corporation October 2013	Establish an additional entry/exit point		RUS FAA	To be published as G819 in 13.11.14
42	<b>CPRS/51</b>	BARIP (7457N 16858W) – LUTEM – OLMIN – ZR (Zyryanka) - ASKIB	State ATM Corporation October 2013	Establish an additional entry/exit point		RUS FAA	To be published as B722 in 13.11.14
43	<b>CPRS/52</b>	Establish an additional CRPs at G819, G493, G226, R351	United Airlines August 2014	Additional CRPs will allow transitions between the existing airways.	Improve route efficiency	RUS	BAKUK, BUNIT, OKLOS CRPS Established. NOTAM: A3748/14, A3750/14, A3745/14, A3743/14
44	<b>CPRS/53</b>	Establish a new ATS route SOTIS PILAN-LURAM-	United Airlines August 2014	Establish a new ATS route.	Improve efficiency of airspace utilization, provide fuel savings and CO <sub>2</sub> reduction.	RUS	The route proposal reviewed. New A303 established. Implementation scheduled for April 2015. as follows: LURAM (664606N 0375031E) - TOKRO (660730N 0391350E) – SOTIS (654100N 0400750E) available flight level band: <u>FL100*</u> <u>FL140</u> <u>FL160*</u> <u>FL200</u> FL080 FL110 FL150 FL170 <u>FL250*</u> <u>FL390</u> <u>FL510*</u> FL210 FL260 FL400



## Section 2. Proposed Trans-East Route Segments (TVRS)

Item	Reference	Route description	Proposed by	Objectives/Comments	Эффект внедрения	States	Target Dates
1	2	3	4	5		6	7
1	<b>TVRS/8</b>	G907 - BANOT (5940.6N 14908.7E) - NILOT (5611.0N 14142.7E) -.6N 13726.1E –4809.5N 13131.6E –MAGIT (474131N 1310900E) – JMU (JAMUSI) (unidirectional from 5340.6N 13726.1E to 474131N 1310900E)	State ATM Corporation. 10.07.2007	a) Open up a new Transeast route to join JMU (JAMUSI); b) Approved and ready for implementation; c) There is no connection in China airspace from 4741.3N 13108.4E – JMU (JAMUSI); d) ASBAT – BA (Balagannoye); e) After opening of the above route. G212 ARGUK - HAB (Khabarovsk VORDME 4832.7N 13512.6E) will be used only for eastbound flying.		RUS CHN	Published as R213 on Oct 20, 2011
2	<b>TVRS/13</b>	ASKIB (5924.1N 14303.1E) - 5340.6N 13726.1E ( <b>ASKIB (592407c 1430312B) - GIRUD (534038c 1372609B</b>	State ATM Corporation. 10.07.2007	a) Open up a new route; b) Approved and ready for implementation		RUS	Published as B722 on Oct 20, 2011
3	<b>CHUKO TKA-1</b>	LISKI (7024.3N 16858.3W) - PEVEK (UHMK) (6947.0N 17035.7E) - CHERSKY (UESS) (6844.6N 16120.2E) -Zyryanka (6543.8N 15046.2E) - INDIK (6316.0N 14312.0E) - Chagda (5845.0N 13039.0E) Flight Level Band 9600-11600 m (bidirectional use)	RACGAT/13	a) UESU – INDIK – Chagda segment is located to close to the existing FIR boundaries and is outside VHF and radar coverage. b) Developed and approved an alternative route G912		RUS USA	Implementation is deemed unreasonable
4	<b>TVRS/14</b>	BELEK (6817.1N 14247.1E) - RODOK (6633.7N 13710.1E) (bidirectional use)	Proposed by airlines August 1. 2009	a) Transition from G969 to G495; b) Approved and ready for implementation		RUS	Published as B969 (by NOTAM ) on Jul 1, 2010
5	<b>TVRS/21</b>	ABAGO (5617.5N 14414.2E) - 5517.2N 14005.3E (ABAGO (561731c 1441418B) - GITAK (551707c 1400520B)	State ATM Corporation. апрель July 10. 2007	a) Open up a new route; Approved and ready for implementation		RUS	Published as G902 on Oct 20, 2011
6	<b>TVRS/22</b>	ARNAP (6440.0N 17025.0E) - ASMOK (6448.8N 16843.2E) – ILMUK (6456.1N 16714.7E) – LUVAK (6502.8N 16526.4E) – OSKON (6514.3N 16032.5E) – ABAPI (6502.5N 15718.3E) – RUBIS (6433.3N 15159.3E) – ELBIN (6340.5N 14532.7E) – INDIK	State ATM Corporation. 30.03.2010	a) Open up a new route; b) North America and Alaska traffic to Afganistan, Kyrgystan (Manas), Beijing, Hong Kong, Mongolia and China;		RUS	Published as B155 (by NOTAM A2204/10) on Jun 3, 2010

Item	Reference	Route description	Proposed by	Objectives/Comments	Эффект внедрения	States	Target Dates
1	2	3	4	5		6	7
		(6316.0N 14312.0E) – KURAK (6247.0N 13651.0E) – LUKON (6230.9N 13338.4E) – UEEE (6205.5N 12947.0E)		c) Approved and ready for implementation Assigned B155 designator			
7	<b>TVRS/23</b>	NUZAN – 5141.2N 16239.1E – RIMLI (5142.3N 15806.8E) – B932	State ATM Corporation. April 2010	a) Transition between R220 and B932; b) Initial review completed		RUS USA	Published as G801 on Nov 17, 2011
8	<b>TVRS/24</b>	5005.0N 15900.0E – 4947.2N 15400.0E – B932	State ATM Corporation. April 2010	a) Transition between R220 and B932; b) Initial review completed		RUS USA	Published as G804 on Nov 17, 2011
9	<b>TVRS/25</b>	NYMPH - 5310.5N 166310.E – RIMLI (5142.3N 15806.8E) – B932	State ATM Corporation. April 2010	a) Transition between R220 and B932; b) Initial review completed		RUS USA	unacceptable at the moment
10	<b>TVRS/26</b>	NYMPH - 5325.0N 167126.E– B932 (5321.6N 16218.4E) -UHPP	United Airlines April 2010	a) Transition between G469 and B932 then to B915; b) Accepted for review		RUS USA	Published as G73 on Nov17, 2011
11	<b>TVRS/27</b>	OLCOT – NUZAN – 5141.0N 16237.6E – RIMLI – SENOR – G73 (B115)	United Airlines April 2010	a) Transition between R580 (A342) and B932 then to G73 (B115); b) Accepted for review		RUS USA	unacceptable at the moment
12	<b>TVRS/28</b>	OGDEN – 4855.5N 15636.2E – NETRI – LATAK – G103	United Airlines April. 2010	a) Transition between R580 (R451) and B932 then to G103; b) Accepted for review		RUS USA	unacceptable at the moment
13	<b>TVRS/29</b>	NETRI – 4304.2N 14640.4E - NODAN	United Airlines April 2010	a) Transition between B932 and B915; b) Requires opening of a new entry/exit fix with Japan c) Accepted for review		RUS JPN	unacceptable at the moment
14	<b>TVRS/30</b>	A803 OSKON-UHMI UHMI - PEMID	Air Canada 14.02.2011	a) remove flight level restrictions 13100-16100		RUS	unacceptable at the moment

Item	Reference	Route description	Proposed by	Objectives/Comments	Эффект внедрения	States	Target Dates
1	2	3	4	5		6	7
15	<b>TVRS/31</b>	a) KURAK (6247.0N 13651.0E) – ODANA б) KURAK – KUNIK	IATA декабрь 2010	a) reduce mileage b) provide transition from R819 to G494		RUS	unacceptable at the moment
16	<b>TVRS/32</b>	Okhotsk - N5340.6 E13726.1	State ATM Corporation. 10.07.2007	open up a new route		RUS	Published as B722 on Oct 20, 2011
17	<b>TVRS/33</b>	ABAGO – GITAK (N.5517.2 E14005.3)	State ATM Corporation. 10.07.2007	open up a new route		RUS	Published as G902 on Oct 20, 2011
18	<b>TVRS/34</b>	BIRBO – ODEKA (N4809.5 E13131.6)	State ATM Corporation. 10.07.2007	open up a new route		RUS	Published as B723 on Oct 20, 2011
19	<b>TVRS/35</b>	ARNAP (N 644000 E 1702510) –ASBAT (N635331 E1644434)	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	extension R213		RUS	Published as R213 on May 31, 2012
20	<b>TVRS/36</b>	AMETO (N582137 E1532037)-NARIT (581534N 1525610E)- BAMUN (580808N 1522641E)-BENGA (575715N 1514437E)- BEBAT (573246N 1501419E)- GRUMA (N560501 E1453036)	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	extension B237		RUS	Published as B237 on May 31, 2012
21	<b>TVRS/37</b>	BUMAT (615007N 1603257E)-BUSUL (612501N 1555402E )-DERUD (604907N 1522350E)	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	extension A827		RUS	Published as A827 on May 31, 2012
22	<b>TVRS/38</b>	BUMAT (615007N 1603257E)-LUNEK (605645N 1552506E)- ODERI (603231N 1532656E)	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	route realignment		RUS	Published as A828 on May 31, 2012
23	<b>TVRS/39</b>	URABI (601201N 1544108E)-BANEB (601415N 1552423E)-SOPUR (601839N 1570605E)-RUNAB (602101N 1581731E)-BEBOR (602257N 1593711E)- DIREG (602413N 1610436E)-RAMKA (602426N	Cathay Pacific 26.07.2011, RDGE/15	a) extension G370 b) Leaving the NOPAC		RUS	Published as G370 on May 31, 2012

Item	Reference	Route description	Proposed by	Objectives/Comments	Эффект внедрения	States	Target Dates
1	2	3	4	5		6	7
		1613257E)-Tilichiki NDB (TK) (602154N 1660045E)-NELTA (605736N 1725315E)-RUSOR (611400N 1775600W)	30.09.2011				
24	<b>TVRS/40</b>	BALUB (564751N 1671435E)- MURTA (562209N 1634311E)- Ust-Kamchatsk NDB (UK) (561324N 1624114E)- OSMOR (551335N 1565706E)- TOSNO (550813N 1563047E)- BANIT (544949N 1550431E)- KORES (535524N 1500000E)- GIRAN (532549N 1474300E)	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	route realignment		RUS	Published as B804 on May 31, 2012
25	<b>TVRS/41</b>	IRKAN-KOKUN-BANIT	Cathay Pacific 26.07.2011, RDGE/15 30.09.2011	route realignment		RUS	Consider after commissioning Ust-Khairyzovo SSR
26	<b>TVRS/42</b>	FA – WZ - SIMLI (Proposed alternative is FA – PARUS – SIMLI)	Pacific United Airlines	route realignment		RUS	
27	<b>TVRS/43</b>	SIBIR – LURED – EKVIK (decommission B451 LURED – IGROD)	IATA	To improve north-south traffic flows between Khabarovsk FIR and Fukuoka FIR	Reduce mileage	RUS JPN	under review
28	<b>TVRS/44</b>	KUNAD - OTLER	RUS 09.08.13	NOPAC transition to Trans-East	Reduce mileage	RUS	To be published as G815 in 13.11.14
29	<b>TVRS/45</b>	LUMES - RIMLI	RUS 09.08.13	NOPAC transition to Trans-East	Reduce mileage	RUS	To be published as G816 in 13.11.14
30	<b>TVRS/46</b>	Ust-Kamchatsk NDB (UK) - MIVAN (552730N 1615931E) - KEGOR (544042N 1611855E) - SIPVA (530624N 1600201E) - Khalaktyrka (HY) (530001N 1584736E) - PETIN (531012N 1582713E) – to be used by coordination with ATC	RUS 09.08.13	To support general aviation flights from US to China		RUS	After implementation of a new automated ATC system at PK ACC. Target date – 2014 – early 2015.
31	<b>TVRS/47</b>	NETRI – 430312N 1463915E - NODAN	RUS 09.08.13	To be used by coordination with ATC to avoid volcanic ash		RUS	Approved in Russia, no approval from Japan.
32	<b>TVRS/48</b>	Troitskoye NDB (FI) - REPIK - ADITO – LANRI Flight levels FL120-FL300 shall be used by coordina-	RUS 05.06.14	Remove flight level restrictions.	Improve B915 efficiency	RUS	Implemented via NOTAM A3155/14

Item	Reference	Route description	Proposed by	Objectives/Comments	Эффект внедрения	States	Target Dates
1	2	3	4	5		6	7
		tion with ATC, FL310-FL530 shall be used without restrictions.					on Aug 28, 2014.

**Abberviations:**

- Proposed cross polar Route Segments (CPRS);
- Proposed Trans-East Route Segments (TVRS);
- Trans-Asian Route Segments (TARS);
- Asian Route Segments (ARS);
- Trans-polar Route Segments ( TPRS);
- Trans-Siberian Route Segments (TSRS);
- Other Route Segments ( DRS)

**Brief catalogue description:**

**Item 1.** Shows an ordinal number of a route proposal.

**Item 2.** Shows reference number of a route proposal.

**Item 3.** Route description consists only of IDENTs for NAVAIDS and 5LNC without coordinates. (where several NAVAIDS have same IDENT include name of NAVAID).

- b) when available. route designators to be included.
- c) unidirectional use of the route to be indicated in text (i.e. Westbound. Eastbound. etc.).
- d) several routes being studied within a single airspace planning package will be entered as one proposal.

**Item 4.** Shows Flight Information Regions (FIR) concerned.

**Item 5.** Shows objectives/comments.

**Item 6.** Proposed by.

**Item 7.** Target dates.

Route proposals that can not be implemented should be marked with grey

Implemented proposals should be marked by green

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<i><b>FIR</b></i>	<i><b>CODE</b></i>
Afghanistan	AFG
Albania	ALB
Algeria	DZA
Armenia	ARM
Austria	AUT
Belarus	BLR
Belgium	BEL
Bosnia and Herzegovina	BIH
Bulgaria	BGR
China	CHN
Croatia	HRV
Cyprus	CYP
Czech Republic	CZE
Democratic People's Republic of Korea	PRK
Denmark	DNK
Egypt	EGY
Estonia	EST
Finland	FIN
France	FRA
Georgia	GEO
Germany	DEU
Greece	GRC
Hungary	HUN
Iceland	ISL
India	IND
Iran, Islamic Republic of	IRN
Iraq	IRQ
Ireland	IRL
Israel	ISR
Italy	ITA
Japan	JPN
Jordan	JOR
Kazakhstan	KAZ
Kuwait	KWT
Kyrgyzstan	KGZ
Latvia	LVA
Lebanon	LBN
Libyan Arab Jamahiriya	LBY
Lithuania	LTU
Luxembourg	LUX
Malta	MLT
Mongolia	MNG
Montenegro	MNE
Morocco	MAR
Netherlands	NLD
Norway	NOR
Pakistan	PAK
Poland	POL
Portugal	PRT
Republic of Azerbaijan	AZE
Republic of Moldova	MDA
Republic of Serbia	SRB
Romania	ROU
Russian Federation	RUS
Saudi Arabia	SAU
Slovak Republic	SVK
Slovenia	SVN

Spain	ESP
Sweden	SWE
Switzerland	CHE
Syrian Arab Republic	SYR
Tajikistan	TJK
The former Yugoslav Republic of Macedonia	MKD
Tunisia	TUN
Turkey	TUR
Turkmenistan	TKM
Ukraine	UKR
United Arab Emirates	ARE
United Kingdom	GBR
United States of America	USA
Uzbekistan	UZB

Легенда каталога маршрутов  
Legend catalog routes

	Предложения, которые не могут быть реализованы в данный момент	
AMATI (780000N 1685824W) - GILOD (755416N 1720106E)	Реализованные предложения	
AMATI (780000N 1685824W) - GILOD (755416N 1720106E)	Предложения, реализуемые в ближайшее время	
AMATI (780000N 1685824W) - GILOD (755416N 1720106E)	Предложения, находящиеся на рассмотрении	
Implementation is deemed unreasonable	Реализация считается необоснованным	
Published as ...	Опубликовано как ...	
Implemented on ...	Реализован с ...	
segment is unavailable before ...	Сегмент недоступен до ...	
under review ...	на рассмотрении	
expected date of commissioning	Планируемый срок ввода ...	
unacceptable at the moment	Неприемлем в данный момент	
Consider after commissioning Ust-Khairyzovo SSR	Рассмотреть после ввода в строй в ВРЦ Усть-Хайрюзово ВРЛ	



**Eighteenth Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group  
(CPWG/18)**

(Paris, France, 16-19 December 2014)

**Agenda Item 7: 2015-2016 Cross Polar Work Program**

**Proposed CPWG Work Program**

(Presented by the Federal Aviation Administration)

**SUMMARY**

During the CPWG/13 meeting, the air navigation service providers (ANSPs) agreed to develop a Work Program and list of on-going tasks and accomplishments to replace the CPWG Planning Chart. This working paper presents the latest version of the program for discussion and updates by the ANSPs.

**1. Introduction**

1.1. The Fifth Meeting of the CPWG (CPWG/5) agreed that it was time to start planning and developing a work program to ensure that the overall goals and objectives of increased efficiencies in the Polar and trans-east region continued. Potential topics for the group's consideration included:

- a. Increase flexible routings (Russian North Coast and others)
- b. Respective ANSPs efforts for improving communications in the area
- c. Development of a single separation standard in region
- d. Improve/Increase efficiencies and predictability on Polar routes

1.2. During the discussions at CPWG/6, it was agreed the work program should focus on strategic objectives for each category instead of specific initiatives and target dates. Based on the input received and discussions during the previous two meetings, five objectives were identified by CPWG/7 to provide the overall structure for the Work Program. They were:

- a. Reduce Separation Standards
- b. Improve Efficiencies for Traffic on Cross Polar and Russian Far East Routes (Routes, Procedures, and System Performance)
- c. Improve Communications
- d. Improve Weather Reporting
- e. Develop Contingency Plan/Safety

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1.3. CPWG/7 agreed that the Terms of Reference (TOR) provided the high level purpose and scope of the CPWG work, and that what was needed was a Planning Chart to document near- and mid-term activities, as well as a summary of accomplishments.

1.4. At the ANSPs' Meeting held prior to CPWG/13, the group considered the value of the Planning Chart in its current format. The meeting felt that the chart had expanded beyond the original intent, which was to serve as a list of near- and mid-term activities, as well as a summary of accomplishments. The FAA agreed to work with the ANSPs to develop a draft Work Program to present to CPWG/14. New Action Item CP13-04 was established to replace Action Item CP12-09.

## **2. Discussion**

2.1. It was agreed that the CPWG needed a written Work Program, which would describe and categorize the activities listed on the current Planning Chart, and define them as near-term or mid-term planning goals. As goals are completed, they would be moved into a list of accomplishments that would be a part of the Work Program. The Planning Chart could then be used strictly for the status of the near-term items (1-3 years), and could become an appendix to the Work Program.

2.2. The Work Program would be reviewed at the ANSPs' Meetings. As work commenced on a particular goal, it would be moved from the written work program to the Planning Chart. Similarly, as initiatives are completed, they would be moved to the list of accomplishments.

2.3. Based on the outcome of the discussions of the ANSPs at CPWG/17, a draft work program has been developed for consideration by the meeting. See **Attachment A**.

2.4. The updated CPWG Planning Chart is at **Attachment B**. A list of completed actions is at **Attachment C**.

## **3. Action by the Meeting**

3.1. The ANSPs meeting is invited to:

- a. review and discuss the information contained in this working paper;
- b. make recommendations to the information provided in Attachments A and B; and
- c. agree to present to CPWG/18.

## **Cross Polar Trans East**

### **Air Traffic Management Providers' Work Group (CPWG)**

#### **Work Program**

The Cross Polar Trans-East Air Traffic Management (ATM) Working Group (CPWG) is recognized by the International Civil Aviation Organization (ICAO) Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS) as a forum to improve the provision of air traffic services (ATS) to aircraft which operate between North America and Asia via Cross Polar and Russian Trans East routes. The CPWG is composed of representatives from the air navigation service providers (ANSPs) responsible for providing ATS in the Arctic and adjacent airspace, representatives from international organizations representing airspace operator groups, and international airlines that operate in the airspace.

#### **Background**

During the discussions at the sixth meeting of the CPWG (CPWG/6) held in Hong Kong China in November 2008, it was agreed a work program was needed that would focus on strategic objectives.

Further discussions during the seventh meeting of the CPWG (CPWG/7) held in Paris, France in June 2009 identified five objectives to provide the overall structure for the Work Program. They were:

- a. Reduce Separation Standards
- b. Improve Efficiencies for Traffic on Cross Polar and Russian Far East Routes (Routes, Procedures, and System Performance)
- c. Improve Communications
- d. Improve Weather Reporting
- e. Develop Contingency Plan/Safety

Based on these objectives, a Planning Chart was developed to document near- and mid-term activities, as well as to maintain a summary of accomplishments.

During a meeting of the air navigation service providers (ANSPs) held in Reykjavik, Iceland in June 2012 prior to the thirteenth meeting of the CPWG (CPWG/13), the group considered the value of the Planning Chart in the format that had been used. The meeting felt that the chart had expanded beyond the original intent, which was to serve as a list of near- and mid-term activities, as well as a summary of accomplishments.

It was agreed that the CPWG needed a written Work Program, which would describe and categorize the activities listed on the Planning Chart, and define near-term or mid-term planning goals. As goals are completed, they would be moved into a list of accomplishments that would be a part of the Work Program. The Planning Chart could become an appendix to the Work Program to track the status of the near-term items.

## **CPWG Objectives**

This section describes the five current objectives of the CPWG.

### **1      *Reduce and Harmonize Separation Standards in International Airspace***

It was agreed that the international operators would benefit from a reduction, as well as harmonization of the vertical, lateral and longitudinal separation standards across the Arctic airspace. This would allow for more efficient altitude changes.

Separation reductions would need to take into account the equipage of aircraft operating in the Arctic and adjacent airspace, and provide for a mixed environment, recognizing the existing and planned aircraft capabilities while providing benefits to operators implementing Required Navigation Performance (RNP).

### **2      *Improve/Increase Efficiencies for Cross Polar and Russian Far East Air Traffic***

Efficiencies could be provided through the development and enhancement of ATS routes, ATM and operator procedures, and improved system performance.

Route efficiencies to be considered include, but are not limited to, the following:

- New routes taking into account the reduced lateral separation standards
- Bi-directional routes
- Procedures for tactical re-routes
- Airline route proposals
- Additional boundary entry/exit points into China
- Implementation of radar hand-offs and procedures between Magadan and Anchorage Flight Information Regions (FIRs)
- ANSPs to work together to develop RVSM transition procedures between each FIR
- Flex Track System
- Simplifying Russian Form R Process

- Improved Air Traffic Flow Management (ATFM) tools and exchange of information between ANSPs and operators through use of the Dynamic Ocean Tracking System Plus (DOTS+) Gateway Reservation List (GRL) and DOTS+ Online (DPO)
- Polar Minimum Time Tracks

### **3      *Improve Communications in Arctic/Polar Region***

It is expected that improved communications in the Arctic airspace (*i.e.*, north of 80 degrees North) would provide enhanced operations.

Communication improvements to be considered include, but are not limited to, the following:

- Benefits from satellite technology (Iridium)
- High Frequency (HF) Air-Ground Data Link
- Current ANSP communication capabilities
- Implementation of Controller Pilot Data Link Communication (CPDLC) and Automatic Dependent Surveillance – Contract (ADS/C) capability for all polar routes
- Automated flight data exchange between facilities
- Monitor communications and data link performance

### **4      *Improve Awareness of Space Weather Issues in Arctic/Polar Region***

Although the CPWG does not have responsibility for weather reporting, some related issues to be considered include, but are not limited to, the following:

- Improve exchange of long range weather and Notices to Airmen (NOTAM) information
- Maintain an awareness of research on space weather and its impact on aviation
- Recognition of the impacts of space weather, including sun spots and HF black outs

## **5      *Improve Safety***

Activities enhancing safety to be considered include, but are not limited to, the following:

- Making contingency response information available, including volcanic activities Procedures for the exchange of all missile launch information\
- Formalizing procedures for publication of NOTAMs and coordination amongst ANSPs and space launch providers

### **Time Frames**

It was agreed that Near-Term activities were defined as those planned to be completed within 1-3 years, and Mid-Term activities would be completed in 4-10 years.

### **Maintenance of the Work Program**

The Work Program will be reviewed by the ANSPs prior to each CPWG meeting. As work commences on a particular goal, it will be moved from the Mid-Terms Goals (**Attachment A**) to the Near-Term Planning Chart (**Attachment B**). Similarly, as initiatives are completed, they would be moved to the list of accomplishments (**Attachment C**).

As new work programs are introduced, they will be added to the appropriate goal section.

## **Mid Term Goals (2017-2022)**

### **REDUCE AND HARMONIZE SEPARATION STANDARDS IN INTERNATIONAL AIRSPACE**

#### **Implement further reductions to lateral separation (aircraft equipage requirements)**

Edmonton FIR RNP-4 Spring 2015

#### **Implement reduced longitudinal separation (aircraft equipage requirements)**

Anchorage Arctic FIR (50NM)

#### **Implement further reductions to longitudinal separation (aircraft equipage requirements)**

Anchorage Arctic FIR (30NM)

### **IMPROVE COMMUNICATIONS IN ARCTIC/POLAR REGION**

#### **Implement AIDC/OLDI for Data Exchange**

Bodo and Murmansk FIRs 2017

#### **Implement CPDLC**

Murmansk FIR 2018



## CPWG Planning Chart

### Near Term Goals (2015-2017)

	Planning Goal	Action with	Status of Action and Target Date
<b>1</b>	<b>REDUCE AND HARMONIZE SEPARATION STANDARDS IN INTERNATIONAL AIRSPACE</b>		
	<b>Harmonize RVSM Transition Procedures</b>		
	Russian and Mongolian FIRs	State ATM/CAA Mongolia	2015
	<b>Implement reduced longitudinal separation (aircraft equipage requirements)</b>		
	Edmonton FIR (5 min or 50NM)	NAV CANADA	Spring 2015
	Reykjavik FIR (10 min)	Isavia	2016
	Reykjavik FIR (5 min)	Isavia	TBD
<b>2</b>	<b>IMPROVE/INCREASE EFFICIENCIES FOR CROSS POLAR AND RUSSIAN FAR EAST AIR TRAFFIC</b>		
	<b>Create seamless and homogeneous airspace for the traffic from North America to Asia with the expansion of User Preferred Routes (Pacific Project)</b>	ANSPs/Operators	TBD
	<b>Improve Efficiency on Cross Polar Routes</b>		

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	Planning Goal	Action with	Status of Action and Target Date
	Add entry/exit fixes on the Anchorage/Russian FIR boundary in order to provide additional parallel routes	FAA/State ATM	Ongoing (Polar 7, 8, & 9 have been added)  2 fixes added BARIP AND SALET
	Eliminate restrictions to file entry fixes on the Anchorage/Edmonton FIR boundary	FAA/NAV CANADA	TBD
	<b>Implement use of Radar Procedures between Magadan ACC and Anchorage ARTCC without Radar Data Sharing</b>		
	Anchorage Arctic FIR	FAA	2018
	Magadan FIR	FATA	2018
	<b>Improve Air Traffic Flow Management (ATFM)</b>		
	Provide DOTS Plus Online Track Advisory to State ATM for monitoring inbound flights (State ATM to request access)	FAA/State ATM	TBD
	Establish CTA in Anchorage Arctic FIR	FAA	TBD
<b>3.</b>	<b>IMPROVE COMMUNICATIONS IN ARCTIC/POLAR REGION</b>		
	<b>Improve communications procedures</b>		
	Change procedures to retain connection with Iridium and HF DL north of 82N	Isavia	2015

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	Planning Goal	Action with	Status of Action and Target Date
	<b>Implement AIDC/OLDI for Data Exchange</b>		
	Russian and Anchorage FIRs	FAA State ATM	2016
	Khabarovsk ACC and Sapporo ACC	State ATM/JCAB	2016
	Reykjavik and Bodo FIRs (AIDC)	Isavia/Avinor	Spring 2015
	Murmansk and Reykjavik FIRs (AIDC)	State ATM/Isavia	2016-2017
	<b>Implement CPDLC for All Polar Routes</b>		
	Murmansk FIR	State ATM	2018
	Bodo	Avinor	Spring 2015
	Magadan FIR (North Sector)	State ATM	COMPLETED
	<b>Implement ADS-C</b>		
	Anchorage Arctic FIR	FAA	2015
	Bodo	Avinor	Spring 2015
	Magadan FIR (North Sector)	State ATM	Completed
	Edmonton FIR	NAV CANADA	Spring 2015
	<b>Monitor Communications and Data Link Performance</b>		
	Provide information on any issues relating to communications/data link performance at CPWG meetings	All ANSPs and Operators	Ongoing

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	Planning Goal	Action with	Status of Action and Target Date
5.	IMPROVE SAFETY		
	<b>Develop CPWG Volcanic Ash Contingency Plan</b>		
	Consider amending LOAs between adjacent ACCs to introduce provisions on contingency reroutes	All	2015
	Formalize teleconference format and process taking into consideration collaborative decision making (CDM)	FAA, State ATM, JCAB	2015
	Streamline the process for issuing NOTAMs on volcanic ash	NAV CANADA, FAA, State ATM	2014
	<b>Implement single AFTN address for each ANSP<sup>1</sup></b>		
	NAV CANADA	NAV CANADA	TBD
	State ATM	State ATM	TBD
	CAAC ATMB	CAAC ATMB	Unknown
	CAA Mongolia	CAA Mongolia	2015
	Kazakstan		TBD

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<sup>1</sup> FAA and JCAB do not plan to implement a single AFTN address

## **Completed Activities**

### **1 REDUCE AND HARMONIZE SEPARATION STANDARDS IN INTERNATIONAL AIRSPACE**

#### **Implement RVSM FL290-410**

#### **Harmonize RVSM Transition Procedures**

Anchorage Arctic FIR

Anchorage Oceanic FIR

Russian FIRs

Fukuoka FIR

#### **Implement 10 Minute Longitudinal Separation for ATS Route B932**

#### **Implement reductions to lateral separation based on aircraft equipage requirements**

Anchorage Oceanic FIR (30NM)

#### **Implement reductions to longitudinal separation based on aircraft equipage requirements**

Anchorage Oceanic FIR (30NM)

### **2 IMPROVE/INCREASE EFFICIENCIES FOR CROSS POLAR AND RUSSIAN FAR EAST AIR TRAFFIC**

#### **Harmonize Procedures for ATS Route B932**

#### **Improve Efficiency on Cross Polar Routes**

17/12/2014

Add entry/exit fixes on the Reykjavik/ Russian FIR boundary

Open new Kamchatka routes from PILUN and LISKI

Open new routes south of ABERI

#### **Improve Efficiency on Russian Trans East Routes**

Eliminate 10 min track loading for RTE over Anchorage/Russian Boundary

#### **Improve Air Traffic Flow Management (ATFM)**

Implement DOTS Plus Online Track Advisory

Reduce track loading to 10 minutes for Cross Polar fixes

Remove requirement for flight to file NOR OTS routes over Canada

#### **Improve ATFM Collaboration**

FAA/NAV CANADA

FAA/State ATM

NAV CANADA/State ATM

#### **Make Tactical Re-Routes Available for Daily Operations**

### **3. IMPROVE COMMUNICATIONS IN ARCTIC/POLAR REGION**

17/12/2014

**Improve communications procedures**

Implement ADS-C periodic contract and lateral and vertical conformance monitoring

**Implement AIDC/OLDI for Data Exchange**

Anchorage Arctic, Oceanic and Continental FIRs (AIDC)

Edmonton FIR (AIDC)

Reykjavik and Edmonton FIRs

**Implement CPDLC for All Polar Routes**

Anchorage Arctic FIR

Reykjavik FIR

Magadan FIR

Magadan FIR (North Sector)

**Implement ADS-C for All Polar Routes**

Edmonton FIR (waypoints only)

Reykjavik FIR

Magadan FIR

**4. IMPROVE AWARENESS OF SPACE WEATHER ISSUES IN ARCTIC/POLAR REGION**

Develop Space Weather User Needs

**5. IMPROVE SAFETY**

**Develop Arctic ATM Operational Contingency Plan**

Publish Document v2 on Web Site

**Implement single AFTN address**

Iceland

Norway

**Implement ICAO Flight Plan 2012**